माधव प्रौद्योगिकी एवं विज्ञान संस्थान, ग्वालियर (म.प्र.), भारत
MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR (M.P.), INDIA
Deemed University
(Declared under Distinct Category by Ministry of Education, Government of India)
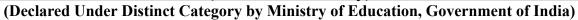NAAC ACCREDITED WITH A++ GRADE

Scheme Structure
of
B. Tech. in
Artificial Intelligence/ Information Technology (Artificial Intelligence and Robotics)/ Artificial Intelligence (AI) and Data Science/ Artificial Intelligence (AI) and Machine Learning
[under the MITS-DU]
(Batch admitted in academic session 2024 – 25)
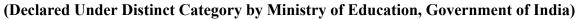
Centre for Artificial Intelligence

Semester-Wise General Scheme Structure & Important Guidelines for Flexible Curriculum

(Batch admitted in Academic Session 2024-25 onwards)

Abbreviations Used

L	Lecture
T	Tutorial
P	Practical
HSMC	Humanities and Social Sciences including Management Courses
BSC	Basic Science Courses
ESC	Engineering Science Courses
DC	Departmental Core
DE	Departmental Elective
SPC	Specialization Courses
OC	Open Category
DLC	Departmental Laboratory Courses
MOOC	Massive Open Online Course
MWS	Mandatory Workshop
SP	Semester Proficiency
SIP	Skill Internship Program
SLP	Self-learning Presentation
PDC	Professional Development Component
PBL	Project Based Learning
PC	Professional Certification
MAC	Mandatory Audit Course
NEC	Novel Engaging Course

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(Deemed University)
(Declared Under Distinct Category by Ministry of Education, Government of India)

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Centre for Artificial Intelligence

Scheme of Evaluation
B. Tech. I Semester *(Artificial Intelligence (AI))*

(for batch admitted in academic session 2024-25)

S. No.	Course Code	Category Code	Course Name	Maximum Marks Allotted						Total Marks	Contact Hours per week			Total Credits	Mode of Learning	Mode of Major Evaluation	Duration of Major Evaluation
				Theory Block				Practical Block									
				Continuous Evaluation			Major Evaluation	Continuous Evaluation	Major Evaluation		L	T	P				
				Minor Evaluation I	Minor Evaluation II	Quiz/ Assignment		Lab Work & Sessional									
1.	31241101	DC	Digital Logic Design	20	20	30	30	-	-	100	3	-	-	3	Face to Face	MCQ	2 Hrs
2.	31241102	DC	Foundations of Artificial Intelligence	20	20	30	30	-	-	100	2	-	-	2	Face to Face	MCQ	2 Hrs
3.	31241103	DC	Internet and Web Technologies	20	20	30	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
4.	31241104	DC	Problem Solving and Programming	20	20	30	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
5.	31241105	BSC	Linear Algebra	20	20	30	30	-	-	100	3	-	-	3	Face to Face	PP	2 Hrs
6.	31241106	DLC	Problem Solving and Programming Lab	-	-	-	-	70	30	100	-	-	2	1	Experimental	AO	-
7.	31241107	DLC	Internet and Web Technologies Lab	-	-	-	-	70	30	100	-	-	2	1	Experimental	AO	-
8.	31241108	SP	Semester Proficiency$	-	-	-	-	50	-	50	-	-	2	1	Face to Face	SO	-
9.	31241109	PBL	Micro Project-I#	-	-	-	-	70	30	100	-	-	2	1	Experiential	SO	-
10.	31241110	HSMC	Language Lab	-	-	-	-	70	30	100	-	-	2	1	Blended	AO	-
11.	NECXXXXX	NEC	Novel Engaging Course (Activity Based Learning)	-	-	-	-	-	50	50	-	1	-	1	Interactive	SO	-
			Total	**100**	**100**	**150**	**150**	**330**	**170**	**1000**	**12**	**03**	**10**	**20**	**-**	**-**	**-**
12.	31241111	MAC	Universal Human Values & Professional Ethics (UHVPE)	20	20	30	30	-	-	100	2	-	-	GRADE	Blended	MCQ	1.5 Hrs
13.	31241112	MWS	Mandatory Workshop on Indian Constitution and Traditional Knowledge at Department Level (Duration: Two Days)											GRADE	Interactive	MCQ	-
	Induction programme of three weeks (MC): Physical activity, Creative Arts, Universal Human Values, Literary, Proficiency Modules, Lectures by Eminent People, Visits to local Areas, Familiarization to Dept./Branch & Innovations.																
	Skill Internship Program (Soft Skill): Minimum 45 hours duration: To be Credited in II Semester.																

$Semester Proficiency– includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in the semester courses

MCQ: Multiple Choice Question   **AO:** Assignment + Oral   **PP:** Pen Paper   **SO:** Submission + Oral   **OB:** Open Book

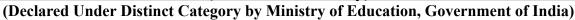#Micro Project-I will be presented and evaluated through an interdisciplinary project evaluation committee.

HSMC	BSC	ESC	DC	DE	SPC	OC	DLC	NEC	SP	SIP	SLP	PDC	PBL	MAC	MWS
1	1	0	4	0	0	0	2	1	1	0	0	0	1	1	1

Mode of Learning					Mode of Examination					Total Credits
Face to Face	Interactive	Blended	Experiential	Experimental	PP	AO	MCQ	OB	SO	
15	1	1	1	2	3	3	11	0	3	20
75	5	5	5	10	15	15	55	0	15	**Credits %**

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Centre for Artificial Intelligence
Scheme of Evaluation
B. Tech. II Semester *(Artificial Intelligence (AI))*

(for batch admitted in academic session 2024-25)

S. No.	Course Code	Category Code	Course Name	Theory Block Continuous Evaluation — Minor Evaluation I	Minor Evaluation II	Quiz/ Assignment	Major Evaluation	Practical Block Continuous Evaluation — Lab Work & Sessional	Major Evaluation	Total Marks	L	T	P	Total Credits	Mode of Learning	Mode of Major Evaluation	Duration of Major Evaluation
1.	31241201	BSC	Discrete Structures	20	20	30	30	-	-	100	3	-	-	**3**	Face to Face	PP	2 Hrs
2.	31241202	DC	Modern Computer Architecture	20	20	30	30	-	-	100	2	1	-	**3**	Face to Face	MCQ	2 Hrs
3.	31241203	DC	Object Oriented Programming	20	20	30	30	-	-	100	2	1	-	**3**	Face to Face	MCQ	2 Hrs
4.	31241204	DC	Data Structures	20	20	30	30	-	-	100	2	1	-	**3**	Face to Face	PP	2 Hrs
5.	31241205	ESC	Basic Electrical & Electronics Engineering	20	20	30	30	-	-	100	2	-	-	**2**	Face to Face	MCQ	2 Hrs
6.	31241206	DLC	Object Oriented Programming Lab	-	-	-	-	70	30	100	-	-	2	**1**	Experimental	AO	-
7.	31241207	DLC	Data Structures Lab	-	-	-	-	70	30	100	-	-	2	**1**	Experimental	AO	-
8.	31241208	DLC	Basic Electrical & Electronics Engineering Lab	-	-	-	-	70	30	100	-	-	2	**1**	Experimental	AO	-
9.	31241209	SP	Semester Proficiency$	-	-	-	-	50	-	50	-	-	2	**1**	Face to Face	SO	-
10.	31241210	PBL	Micro Project-II#	-	-	-	-	70	30	100	-	-	2	**1**	Experiential	SO	-
11.	NECXXXXX	NEC	Novel Engaging Course (Activity Based Learning)	-	-	-	-	-	50	50	-	1	-	**1**	Interactive	SO	-
12.	SIP1XXXX	SIP	Skill Internship Program (Soft Skill)	-	-	-	-	42	18	60	-	-	-	**2****	Experiential	SO	-
			Total	100	100	150	150	372	188	1060	11	04	10	**22**	-	-	-
13.	31241211	MAC	Sustainability & Environmental Science	20	20	30	30	-	-	100	2	-	-	**GRADE**	Blended	MCQ	1.5 Hrs
14.	31241212	MWS	Mandatory Workshop on Indian Knowledge System at Department Level (Duration: Two Days)											**GRADE**	Interactive	MCQ	-
			Summer Semester of six-eight week duration will be conducted for makeup of I & II semester examination.														

$Semester Proficiency– includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in the semester courses

MCQ: Multiple Choice Question **AO:** Assignment + Oral **PP:** Pen Paper **SO:** Submission + Oral **OB:** Open Book

**These credits will be transferred from the Skill Internship Program (Soft Skill).

#Micro Project-II will be presented and evaluated through an interdisciplinary project evaluation committee.

HSMC	BSC	ESC	DC	DE	SPC	OC	DLC	NEC	SP	SIP	SLP	PDC	PBL	MAC	MWS
0	1	1	3	0	0	0	3	1	1	0	0	0	1	1	1

Mode of Learning					Mode of Examination					Total Credits
Face to Face	Interactive	Blended	Experiential	Experimental	PP	AO	MCQ	OB	SO	
15	1	0	3	3	6	3	8	0	5	22
68	4	0	14	14	27	14	36	0	23	Credits %

Centre for Artificial Intelligence
Scheme of Evaluation
B. Tech. III Semester *(Artificial Intelligence (AI))*

(for batch admitted in academic session 2024-25)

S. No.	Course Code	Category Code	Course Name	Theory Block Continuous Evaluation Minor Evaluation I	Minor Evaluation II	Quiz/ Assignment	Major Evaluation	Practical Block Continuous Evaluation Lab Work & Sessional	Major Evaluation	Total Marks	L	T	P	Total Credits	Mode of Learning	Mode of Major Evaluation	Duration of Major Evaluation
1.	31242101	BSC	Probability and Random Processes	20	20	30	30	-	-	100	3	1	-	4	Face to Face	PP	2 Hrs
2.	31242102	DC	Design & Analysis of Algorithms	20	20	30	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
3.	31242103	DC	Knowledge Representation and Reasoning	20	20	30	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
4.	31242104	DC	Computer Networks	20	20	30	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
5.	31242105	DC	Operating Systems	20	20	30	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
6.	31242106	DLC	Problem Solving through Python Programming	-	-	-	-	70	30	100	-	-	2	1	Experimental	AO	-
7.	31242107	DLC	Design & Analysis of Algorithms Lab	-	-	-	-	70	30	100	-	-	2	1	Experimental	AO	-
8.	31242108	SP	Semester Proficiency$	-	-	-	-	50	-	50	-	-	2	1	Face to Face	SO	-
9.	31242109	PBL	Macro Project-I#	-	-	-	-	70	30	100	-	-	2	1	Experiential	SO	-
10.	31242110	SLP	Self-learning/Presentation$$$ (SWAYAM/NPTEL/MOOC)	-	-	-	-	40	-	40	-	-	2	1	Mentoring	SO	-
11.	NECXXXXX	NEC	Novel Engaging Course (Activity Based Learning)	-	-	-	-	-	50	50	-	1	-	1	Interactive	SO	-
			Total	**100**	**100**	**150**	**150**	**300**	**140**	**940**	**11**	**06**	**10**	**22**	**-**	**-**	**-**
12.	31242111	MAC	Cyber Security	20	20	30	30	-	-	100	2	-	-	GRADE	Blended	MCQ	1.5 Hrs
13.	31242112	MWS	Mandatory Workshop on Internet of Things(IoT) at Department Level (Duration: Two Days)											GRADE	Interactive	MCQ	-
			Skill Internship Program (Institute Level) (Qualifier): Minimum 30 hours duration: To be Credited in IV Semester														

$Semester Proficiency– includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in the semester courses

MCQ: Multiple Choice Question   **AO:** Assignment + Oral   **PP:** Pen Paper   **SO:** Submission + Oral   **OB:** Open Book

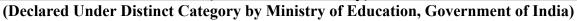#Macro Project-I will be presented and evaluated through an interdisciplinary project evaluation committee.

$$$Compulsory registration for one online course using SWAYAM/NPTEL/ MOOC, evaluation through attendance and presentation.

HSMC	BSC	ESC	DC	DE	SPC	OC	DLC	NEC	SP	SIP	SLP	PDC	PBL	MAC	MWS
0	1	0	4	0	0	0	2	1	1	1	1	0	1	1	1

Mode of Learning						Mode of Examination					Total Credits
Face to Face	Interactive	Blended	Mentoring	Experiential	Experimental	PP	AO	MCQ	OB	SO	
17	1	0	1	1	2	4	2	12	0	4	22
78	4	0	4	4	10	18	9	55	0	18	Credits %

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Centre for Artificial Intelligence
Scheme of Evaluation
B. Tech. IV Semester *(Artificial Intelligence (AI))*

(for batch admitted in academic session 2024-25)

S. No.	Course Code	Category Code	Course Name	Theory Block Continuous Evaluation Minor Evaluation I	Minor Evaluation II	Quiz/ Assignment	Major Evaluation	Practical Block Continuous Evaluation Lab Work & Sessional	Major Evaluation	Total Marks	L	T	P	Total Credits	Mode of Learning	Mode of Major Evaluation	Duration of Major Evaluation
1.	31242201	DC	Database Management System	20	20	30	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
2.	31242202	DC	Theory of Computation	20	20	30	30	-	-	100	2	1	-	3	Face to Face	PP	2 Hrs
3.	31242203	DC	Software Engineering	20	20	30	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
4.	31242204	DC	Network and Web Security	20	20	30	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
5.	31242205	BSC	Calculus and optimization Techniques	20	20	30	30	-	-	100	3	-	-	3	Face to Face	PP	2 Hrs
6.	31242206	DLC	Database Management System Lab	-	-	-	-	70	30	100	-	-	2	1	Experimental	AO	-
7.	31242207	DLC	Java Programming Lab	-	-	-	-	70	30	100	-	-	2	1	Experimental	AO	-
8.	31242208	DLC	Competitive Programming Lab	-	-	-	-	70	30	100	-	-	2	1	Experimental	AO	-
9.	31242209	SP	Semester Proficiency$	-	-	-	-	50	-	50	-	-	2	1	Face to Face	SO	-
10.	31242210	PBL	Macro Project-II#	-	-	-	-	70	30	100	-	-	2	1	Experiential	SO	-
11.	31242211	PBL	Professional Certification	-	-	-	-	50	-	50	-	-	2	1	Blended	SO	-
12.	NECXXXXX	NEC	Novel Engaging Course (Activity Based Learning)	-	-	-	-	-	50	50	-	1	-	1	Interactive	SO	-
13.	SIP3XXXX	SIP	Skill Internship Program	-	-	-	-	42	18	60	-	-	-	2**	Experiential	SO	-
			Total	**100**	**100**	**150**	**150**	**422**	**188**	**1110**	**11**	**05**	**12**	**24**	**-**	**-**	**-**
14.	31242212	MAC	Project Management, Economics & Financing	20	20	30	30	-	-	100	2	-	-	GRADE	Blended	MCQ	1.5 Hrs
15.	31242213	MWS	Mandatory Workshop on Computer Vision at Department Level (Duration: Two Days)											GRADE	Interactive	MCQ	-
16.	31242214	MWS	Mandatory Workshop on Life Skills at Department Level (Duration: Two Days)											GRADE	Interactive	MCQ	-

Summer Semester of six-eight week duration will be conducted for makeup of previous semester examination.

Additional Course for Honours or Minor Degree: Permitted to opt for maximum two additional courses for the award of Honours or Minor Degree

$Semester Proficiency– includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in the semester courses

MCQ: Multiple Choice Question   **AO:** Assignment + Oral   **PP:** Pen Paper   **SO:** Submission + Oral   **OB:** Open Book

#Macro Project-II will be presented and evaluated through an interdisciplinary project evaluation committee.

**These credits will be transferred from the Skill Internship Program.

HSMC	BSC	ESC	DC	DE	SPC	OC	DLC	NEC	SP	SIP	SLP	PDC	PBL	MAC	MWS
0	1	0	4	0	0	0	3	1	1	0	0	0	2	1	2

Mode of Learning					Mode of Examination					Total Credits
Face to Face	Interactive	Blended	Experiential	Experimental	PP	AO	MCQ	OB	SO	
16	1	1	3	3	6	3	9	0	6	24
66	4	4	13	13	25	13	37	0	25	Credits %

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Centre for Artificial Intelligence
Scheme of Evaluation
B. Tech. V Semester *(Artificial Intelligence (AI))*

(for batch admitted in academic session 2024-25)

S. No.	Course Code	Category Code	Course Name	Theory Block — Continuous Evaluation — Minor Evaluation I	Minor Evaluation II	Quiz/ Assignment	Major Evaluation	Practical Block — Continuous Evaluation — Lab Work & Sessional	Major Evaluation	MOOCs — Exam	Assignment	Total Marks	L	T	P	Total Credits	Mode of Learning	Mode of Major Evaluation	Duration of Major Evaluation
1.	31243101	DC	Machine Learning and Data Science	20	20	30	30	-	-	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
2.	31243102	DC	Cloud Computing & Virtualization	20	20	30	30	-	-	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
3.	31243103	DC	Evolutionary Algorithms and Optimization	20	20	30	30	-	-	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
4.	312431XX	DE	Departmental Elective* (DE-1)	-	-	-	-	-	-	25	75	100	3	-	-	3	Online	MCQ	3 Hrs
5.	312431XX	SPC	Specialization Course (SPC-1)	20	20	30	30	-	-	-	-	100	2	1	-	3	Face to Face	PP	2 Hrs
6.	31243104	DLC	Machine Learning and Data Science Lab	-	-	-	-	70	30	-	-	100	-	-	2	1	Experimental	AO	-
7.	31243105	DLC	Cloud Computing & Virtualization Lab	-	-	-	-	70	30	-	-	100	-	-	2	1	Experimental	AO	-
8.	31243106	SP	Semester Proficiency$	-	-	-	-	50	-	-	-	50	-	-	2	1	Face to Face	SO	-
9.	31243107	PBL	Cornerstone Project	-	-	-	-	70	30	-	-	100	-	-	4	2	Experiential	SO	-
			Total	**80**	**80**	**120**	**120**	**260**	**90**	**25**	**75**	**850**	**11**	**04**	**10**	**20**	-	-	-
10.	31243108	MAC	Supply Chain Management	20	20	30	30	-	-			100	2	-	-	GRADE	Blended	MCQ	1.5 Hrs
11.	31243109	MWS	Mandatory Workshop on Blockchain at Department Level (Duration: Two Days)													GRADE	Interactive	MCQ	-

Additional Course for Honours or Minor Degree: Permitted to opt for maximum two additional courses for the award of Honours or Minor Degree

$Semester Proficiency– includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in the semester courses

MCQ: Multiple Choice Question   **AO:** Assignment + Oral   **PP:** Pen Paper   **SO:** Submission + Oral   **OB:** Open Book
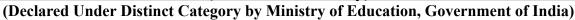
* Course run through SWAYAM/NPTEL/ MOOC Learning Based Platform

HSMC	BSC	ESC	DC	DE	SPC	OC	DLC	NEC	SP	SIP	SLP	PDC	PBL	MAC	MWS
0	0	0	3	1	1	0	2	0	1	1	0	0	1	1	1

Mode of Learning					Mode of Examination					Total Credits
Face to Face	Online	Blended	Experiential	Experimental	PP	AO	MCQ	OB	SO	
13	3	0	2	2	3	2	12	0	3	20
65	15	0	10	10	15	10	60	0	15	Credits %

Centre for Artificial Intelligence
Scheme of Evaluation
B. Tech. VI Semester *(Artificial Intelligence (AI))*

(for batch admitted in academic session 2024-25)

S. No.	Course Code	Category Code	Course Name	Maximum Marks Allotted								Total Marks	Contact Hours per week			Total Credits	Mode of Learning	Mode of Major Evaluation	Duration of Major Evaluation
				Theory Block				Practical Block		MOOCs									
				Continuous Evaluation			Major Evaluation	Continuous Evaluation	Major Evaluation	Exam	Assignment		L	T	P				
				Minor Evaluation I	Minor Evaluation II	Quiz/ Assignment		Lab Work & Sessional											
1.	31243201	DC	Cognitive Computing and Deep Learning	20	20	30	30	-	-	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
2.	31243202	DC	Image Processing	20	20	30	30	-	-	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
3.	312432XX	DE	Departmental Elective* (DE-2)	-	-	-	-	-	-	25	75	100	3	-	-	3	Online	MCQ	3 Hrs
4.	312432XX	OC	Open Category Course (OC-1)	20	20	30	30	-	-	-	-	100	2	1	-	3	Face to Face	PP	2 Hrs
5.	312432XX	SPC	Specialization Course (SPC-2)	20	20	30	30	-	-	-	-	100	3	-	-	3	Face to Face	PP	2 Hrs
6.	31243203	DLC	Cognitive Computing and Deep Learning Lab	-	-	-	-	70	30	-	-	100	-	-	2	1	Experimental	AO	-
7.	31243204	DLC	Image Processing Lab	-	-	-	-	70	30	-	-	100	-	-	2	1	Experimental	AO	-
8.	31243205	SP	Semester Proficiency$	-	-	-	-	50	-	-	-	50	-	-	2	1	Face to Face	SO	-
9.	31243206	PBL	Capstone Project	-	-	-	-	70	30	-	-	100	-	-	4	2	Experiential	SO	-
			Total	**80**	**80**	**120**	**120**	**260**	**90**	**25**	**75**	**850**	**12**	**03**	**10**	**20**	**-**	**-**	**-**
10.	31243207	MAC	Disaster Management	20	20	30	30	-	-	-	-	100	2	-	-	GRADE	Blended	MCQ	1.5 Hrs
11.	31243208	MWS	Mandatory Workshop on Intellectual Property Rights at Department Level (Duration: Two Days)													GRADE	Interactive	MCQ	-

Skill Enhancement Program/Research Internship/On Job Training for Four weeks duration (Optional)
Summer Semester of six-eight week duration will be conducted for makeup of Previous semester examination.
Additional Course for Honours or Minor Degree: Permitted to opt for maximum two additional courses for the award of Honours or Minor Degree

$Semester Proficiency– includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in the semester courses
MCQ: Multiple Choice Question   **AO:** Assignment + Oral   **PP:** Pen Paper   **SO:** Submission + Oral   **OB:** Open Book
* Course run through SWAYAM/NPTEL/ MOOC Learning Based Platform

HSMC	BSC	ESC	DC	DE	SPC	OC	DLC	NEC	SP	SIP	SLP	PDC	PBL	MAC	MWS
0	0	0	2	1	1	1	2	0	1	0	0	0	1	1	1

Mode of Learning					Mode of Examination					Total Credits
Face to Face	Online	Blended	Experiential	Experimental	PP	AO	MCQ	OB	SO	
13	3	0	2	2	6	2	9	0	3	20
65	15	0	10	10	30	10	45	0	15	Credits %

Centre for Artificial Intelligence
Scheme of Evaluation
B. Tech. VII Semester *(Artificial Intelligence (AI))*

(for batch admitted in academic session 2024-25)

S. No.	Course Code	Category Code	Course Name	Theory Block — Minor Evaluation I	Theory Block — Minor Evaluation II	Theory Block — Quiz/Assignment	Theory Block — Major Evaluation	Practical Block — Lab Work & Sessional	Practical Block — Major Evaluation	MOOCs — Assignment	MOOCs — Exam	Total Marks	L	T	P	Total Credits	Mode of Learning	Mode of Major Evaluation	Duration of Major Evaluation
1.	312441XX	DE	Departmental Elective (DE-3)	20	20	30	30	-	-	-	-	100	3	-	-	**3**	Face to Face	PP	2 Hrs
2.	312441XX	DE	Departmental Elective* (DE-4)	-	-	-	-	-	-	25	75	100	3	-	-	**3**	Online	MCQ	3 Hrs
3.	312441XX	OC	Open Category Course (OC-2)	20	20	30	30	-	-	-	-	100	2	1	-	**3**	Face to Face	PP	2 Hrs
4.	312441XX	SPC	Specialization Course (SPC-3)	20	20	30	30	-	-	-	-	100	2	1	-	**3**	Face to Face	MCQ	2 Hrs
5.	31244101	SP	Semester Proficiency$	-	-	-	-	50	-	-	-	50	-	-	2	**1**	Face to Face	SO	-
6.	31244102	DLC	Creative Problem Solving	-	-	-	-	70	30	-	–	100	-	-	2	**1**	Experiential	SO	-
			Total	60	60	90	90	120	30	25	75	550	10	02	04	**14**	-	-	-
7.	31244103	MWS	Mandatory Workshop on Advanced Intellectual Property Rights at Department Level (Duration: Two Days)													**GRADE**	Interactive	MCQ	-

$Semester Proficiency– includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in the semester courses

MCQ: Multiple Choice Question   **AO:** Assignment + Oral   **PP:** Pen Paper   **SO:** Submission + Oral   **OB:** Open Book

* Course run through SWAYAM/NPTEL/ MOOC Learning Based Platform

HSMC	BSC	ESC	DC	DE	SPC	OC	DLC	NEC	SP	SIP	SLP	PDC	PBL	MAC	MWS
0	0	0	0	2	1	1	1	0	1	0	0	0	0	0	1

Mode of Learning — Face to Face	Online	Blended	Experiential	Experimental	Mode of Examination — PP	AO	MCQ	OB	SO	Total Credits
10	3	0	1	0	6	0	6	0	2	14
71.43	21.43	0	7.14	0	42.86	0	42.86	0	14.28	**Credits %**

Centre for Artificial Intelligence
Scheme of Evaluation
B. Tech. VIII Semester *(Artificial Intelligence (AI))*

(for batch admitted in academic session 2024-25)

S. No.	Course Code	Category Code	Course Name	Theory Block Continuous Evaluation — Minor Evaluation I	Minor Evaluation II	Quiz/ Assignment	Major Evaluation	Practical Block Continuous Evaluation	Major Evaluation	MOOCs Assignment	Exam	Total Marks	L	T	P	Total Credits	Mode of Learning	Mode of Major Evaluation	Duration of Major Evaluation
1.	312442XX	DE	Departmental Elective* (DE-5)	-	-	-	-	-	-	25	75	100	3	-	-	**3**	Online	MCQ	3 Hrs
2.	312442XX	OC	Open Category Course* (OC-3)	-	-	-	-	-	-	25	75	100	3	-	-	**3**	Online	MCQ	3 Hrs
3.	31244201	PBL	Industry Internship/ Research Internship/ Innovation & Start-up	-	-	-	-	280	120	-	-	400	-	-	20	**10**	Experiential	SO	-
4.	31244202	PDC	Professional Development##	-	-	-	-	-	50	-	-	50	-	-	4	**2**	Interactive	SO	-
			Total	-	-	-	-	280	170	50	150	650	06	-	24	18	-	-	-

Summer Semester of six-eight week duration will be conducted to complete any backlog courses.
Additional Course for Honours or Minor Degree: Permitted to opt for maximum two additional courses for the award of Honours or Minor Degree

MCQ: Multiple Choice Question   **AO:** Assignment + Oral   **PP:** Pen Paper   **SO:** Submission + Oral   **OB:** Open Book

*Course run through SWAYAM/NPTEL/ MOOC Learning Based Platform

Evaluation will be based on participation/laurels brought by the students to the institution in national/state level technical and other events during the complete tenure of the UG programme (participation in professional chapter activities, club activities, cultural events, sports, personality development activities, collaborative events, MOOCs, technical events, institute/department committees, etc.)
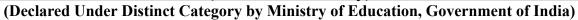
HSMC	BSC	ESC	DC	DE	SPC	OC	DLC	NEC	SP	SIP	SLP	PDC	PBL	MAC	MWS
0	0	0	0	1	0	1	0	0	0	0	0	1	1	0	0

Mode of Learning					Mode of Examination					Total Credits
Interactive	Online	Blended	Experiential	Experimental	PP	AO	MCQ	OB	SO	
2	6	0	10	0	0	0	6	0	12	18
11.11	33.33	0	55.56	0	0	0	33.33	0	66.67	**Credits %**

Centre for Artificial Intelligence

Semester-Wise General Scheme Structure & Important Guidelines for Flexible Curriculum

(Batch admitted in Academic Session 2024-25 onwards)

Abbreviations Used

L	Lecture
T	Tutorial
P	Practical
HSMC	Humanities and Social Sciences including Management Courses
BSC	Basic Science Courses
ESC	Engineering Science Courses
DC	Departmental Core
DE	Departmental Elective
SPC	Specialization Courses
OC	Open Category
DLC	Departmental Laboratory Courses
MOOC	Massive Open Online Course
MWS	Mandatory Workshop
SP	Semester Proficiency
SIP	Skill Internship Program
SLP	Self-learning Presentation
PDC	Professional Development Component
PBL	Project Based Learning
PC	Professional Certification
MAC	Mandatory Audit Course
NEC	Novel Engaging Course

Centre for Artificial Intelligence

Scheme of Evaluation
B. Tech. I Semester *(Information Technology (Artificial Intelligence and Robotics))*

(for batch admitted in academic session 2024-25)

S. No.	Course Code	Category Code	Course Name	Minor Evaluation I	Minor Evaluation II	Quiz/ Assignment	Major Evaluation	Lab Work & Sessional	Major Evaluation	Total Marks	L	T	P	Total Credits	Mode of Learning	Mode of Major Evaluation	Duration of Major Evaluation
1.	24241101	DC	Digital Logic Design	20	20	30	30	-	-	100	3	-	-	3	Face to Face	MCQ	2 Hrs
2.	24241102	DC	Foundations of Artificial Intelligence and Robotics	20	20	30	30	-	-	100	2	-	-	2	Face to Face	MCQ	2 Hrs
3.	24241103	DC	Electronic Systems	20	20	30	30	-	-	100	2	1	-	3	Face to Face	PP	2 Hrs
4.	24241104	DC	Problem Solving and Programming	20	20	30	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
5.	24241105	BSC	Linear Algebra	20	20	30	30	-	-	100	3	-	-	3	Face to Face	PP	2 Hrs
6.	24241106	DLC	Problem Solving and Programming Lab	-	-	-	-	70	30	100	-	-	2	1	Experimental	AO	-
7.	24241107	DLC	Electronic Systems Lab	-	-	-	-	70	30	100	-	-	2	1	Experimental	AO	-
8.	24241108	SP	Semester Proficiency$	-	-	-	-	50	-	50	-	-	2	1	Face to Face	SO	-
9.	24241109	PBL	Micro Project-I#	-	-	-	-	70	30	100	-	-	2	1	Experiential	SO	-
10.	24241110	HSMC	Language Lab	-	-	-	-	70	30	100	-	-	2	1	Blended	AO	-
11.	NECXXXXX	NEC	Novel Engaging Course (Activity Based Learning)	-	-	-	-	-	50	50	-	1	-	1	Interactive	SO	-
			Total	**100**	**100**	**150**	**150**	**330**	**170**	**1000**	**12**	**03**	**10**	**20**	**-**	**-**	**-**
12.	24241111	MAC	Universal Human Values & Professional Ethics (UHVPE)	20	20	30	30	-	-	100	2	-	-	GRADE	Blended	MCQ	1.5 Hrs
13.	24241112	MWS	Mandatory Workshop on Indian Constitution and Traditional Knowledge at Department Level (Duration: Two Days)											GRADE	Interactive	MCQ	-

Induction programme of three weeks (MC): Physical activity, Creative Arts, Universal Human Values, Literary, Proficiency Modules, Lectures by Eminent People, Visits to local Areas, Familiarization to Dept./Branch & Innovations.

Skill Internship Program (Soft Skill): Minimum 45 hours duration: To be Credited in II Semester.

$Semester Proficiency– includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in the semester courses

MCQ: Multiple Choice Question   **AO:** Assignment + Oral   **PP:** Pen Paper   **SO:** Submission + Oral   **OB:** Open Book

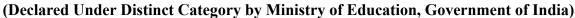#Micro Project-I will be presented and evaluated through an interdisciplinary project evaluation committee.

HSMC	BSC	ESC	DC	DE	SPC	OC	DLC	NEC	SP	SIP	SLP	PDC	PBL	MAC	MWS
1	1	0	4	0	0	0	2	1	1	0	0	0	1	1	1

Mode of Learning					Mode of Examination					Total Credits
Face to Face	Interactive	Blended	Experiential	Experimental	PP	AO	MCQ	OB	SO	
15	1	1	1	2	6	3	8	0	3	20
75	5	5	5	10	30	15	40	0	15	**Credits %**

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR
(Deemed University)
(Declared Under Distinct Category by Ministry of Education, Government of India)

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Centre for Artificial Intelligence
Scheme of Evaluation

B. Tech. II Semester *(Information Technology (Artificial Intelligence and Robotics))*

(for batch admitted in academic session 2024-25)

S. No.	Course Code	Category Code	Course Name	Minor Evaluation I	Minor Evaluation II	Quiz/ Assignment	Major Evaluation	Lab Work & Sessional	Major Evaluation	Total Marks	L	T	P	Total Credits	Mode of Learning	Mode of Major Evaluation	Duration of Major Evaluation
				Theory Block — Continuous Evaluation				**Practical Block — Continuous Evaluation**			**Contact Hours per week**						
1.	24241201	BSC	Discrete Structures	20	20	30	30	-	-	100	3	-	-	**3**	Face to Face	PP	2 Hrs
2.	24241202	DC	Modern Computer Architecture	20	20	30	30	-	-	100	2	1	-	**3**	Face to Face	MCQ	2 Hrs
3.	24241203	DC	Object Oriented Programming	20	20	30	30	-	-	100	2	1	-	**3**	Face to Face	MCQ	2 Hrs
4.	24241204	DC	Data Structures	20	20	30	30	-	-	100	2	1	-	**3**	Face to Face	PP	2 Hrs
5.	24241205	DC	Sensors and Actuators	20	20	30	30	-	-	100	2	-	-	**2**	Face to Face	MCQ	2 Hrs
6.	24241206	DLC	Object Oriented Programming Lab	-	-	-	-	70	30	100	-	-	2	**1**	Experimental	AO	-
7.	24241207	DLC	Data Structures Lab	-	-	-	-	70	30	100	-	-	2	**1**	Experimental	AO	-
8.	24241208	DLC	Sensors and Actuators Lab	-	-	-	-	70	30	100	-	-	2	**1**	Experimental	AO	-
9.	24241209	SP	Semester Proficiency$	-	-	-	-	50	-	50	-	-	2	**1**	Face to Face	SO	-
10.	24241210	PBL	Micro Project-II#	-	-	-	-	70	30	100	-	-	2	**1**	Experiential	SO	-
11.	NECXXXXX	NEC	Novel Engaging Course (Activity Based Learning)	-	-	-	-	-	50	50	-	1	-	**1**	Interactive	SO	-
12.	SIP1XXXX	SIP	Skill Internship Program (Soft Skill)	-	-	-	-	42	18	60	-	-	-	**2****	Experiential	SO	-
			Total	100	100	150	150	372	188	1060	11	04	10	**22**	-	-	-
13.	24241211	MAC	Sustainability & Environmental Science	20	20	30	30	-	-	100	2	-	-	**GRADE**	Blended	MCQ	1.5 Hrs
14.	24241212	MWS	Mandatory Workshop on Indian Knowledge System at Department Level (Duration: Two Days)											**GRADE**	Interactive	MCQ	-
			Summer Semester of six-eight week duration will be conducted for makeup of I & II semester examination.														

$Semester Proficiency– includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in the semester courses

MCQ: Multiple Choice Question   **AO:** Assignment + Oral   **PP:** Pen Paper   **SO:** Submission + Oral   **OB:** Open Book

**These credits will be transferred from the Skill Internship Program (Soft Skill).

#Micro Project-II will be presented and evaluated through an interdisciplinary project evaluation committee.

HSMC	BSC	ESC	DC	DE	SPC	OC	DLC	NEC	SP	SIP	SLP	PDC	PBL	MAC	MWS
0	1	0	4	0	0	0	3	1	1	0	0	0	1	1	1

Mode of Learning					Mode of Examination					Total Credits
Face to Face	Interactive	Blended	Experiential	Experimental	PP	AO	MCQ	OB	SO	
15	1	0	3	3	6	3	8	0	5	22
68	4	0	14	14	27	14	36	0	23	Credits %

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR
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Centre for Artificial Intelligence
Scheme of Evaluation
B. Tech. III Semester *(Information Technology (Artificial Intelligence and Robotics))*

(for batch admitted in academic session 2024-25)

S. No.	Course Code	Category Code	Course Name	Theory Block — Continuous Evaluation — Minor Evaluation I	Minor Evaluation II	Quiz/ Assignment	Major Evaluation	Practical Block — Continuous Evaluation — Lab Work & Sessional	Major Evaluation	Total Marks	L	T	P	Total Credits	Mode of Learning	Mode of Major Evaluation	Duration of Major Evaluation
1.	24242101	BSC	Probability and Random Processes	20	20	30	30	-	-	100	3	1	-	4	Face to Face	PP	2 Hrs
2.	24242102	DC	Design & Analysis of Algorithms	20	20	30	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
3.	24242103	DC	Control System	20	20	30	30	-	-	100	2	1	-	3	Face to Face	PP	2 Hrs
4.	24242104	DC	Computer Networks	20	20	30	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
5.	24242105	DC	Operating Systems	20	20	30	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
6.	24242106	DLC	Problem Solving through Python Programming	-	-	-	-	70	30	100	-	-	2	1	Experimental	AO	-
7.	24242107	DLC	Design & Analysis of Algorithms Lab	-	-	-	-	70	30	100	-	-	2	1	Experimental	AO	-
8.	24242108	SP	Semester Proficiency$	-	-	-	-	50	-	50	-	-	2	1	Face to Face	SO	-
9.	24242109	PBL	Macro Project-I#	-	-	-	-	70	30	100	-	-	2	1	Experiential	SO	-
10.	24242110	SLP	Self-learning/Presentation$$$ (SWAYAM/NPTEL/MOOC)	-	-	-	-	40	-	40	-	-	2	1	Mentoring	SO	-
11.	NECXXXXX	NEC	Novel Engaging Course (Activity Based Learning)	-	-	-	-	-	50	50	-	1	-	1	Interactive	SO	-
			Total	100	100	150	150	300	150	940	11	06	10	22	-	-	-
12.	24242111	MAC	Cyber Security	20	20	30	30	-	-	100	2	-	-	GRADE	Blended	MCQ	1.5 Hrs
13.	24242112	MWS	Mandatory Workshop on Internet of Things(IoT) at Department Level (Duration: Two Days)											GRADE	Interactive	MCQ	-

Skill Internship Program (Institute Level) (Qualifier): Minimum 30 hours duration: To be Credited in IV Semester

$Semester Proficiency– includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in the semester courses

MCQ: Multiple Choice Question   **AO:** Assignment + Oral   **PP:** Pen Paper   **SO:** Submission + Oral   **OB:** Open Book

#Macro Project-I will be presented and evaluated through an interdisciplinary project evaluation committee.

$$$Compulsory registration for one online course using SWAYAM/NPTEL/ MOOC, evaluation through attendance and presentation.

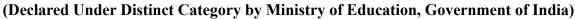| HSMC	BSC	ESC	DC	DE	SPC	OC	DLC	NEC	SP	SIP	SLP	PDC	PBL	MAC	MWS
0	1	0	4	0	0	0	2	1	1	1	1	0	1	1	1

Mode of Learning						Mode of Examination					Total Credits
Face to Face	Interactive	Blended	Mentoring	Experiential	Experimental	PP	AO	MCQ	OB	SO	
17	1	0	1	1	2	7	2	9	0	4	22
78	4	0	4	4	10	32	9	41	0	18	**Credits %**

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR
(Deemed University)
(Declared Under Distinct Category by Ministry of Education, Government of India)

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Centre for Artificial Intelligence
Scheme of Evaluation
B. Tech. IV Semester *(Information Technology (Artificial Intelligence and Robotics))*

(for batch admitted in academic session 2024-25)

S. No.	Course Code	Category Code	Course Name	Theory Block Continuous Evaluation - Minor Evaluation I	Minor Evaluation II	Quiz/ Assignment	Major Evaluation	Practical Block Continuous Evaluation - Lab Work & Sessional	Major Evaluation	Total Marks	L	T	P	Total Credits	Mode of Learning	Mode of Major Evaluation	Duration of Major Evaluation
1.	24242201	DC	Robot Kinematics	20	20	30	30	-	-	100	2	1	-	3	Face to Face	PP	2 Hrs
2.	24242202	DC	Network and Web Security	20	20	30	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
3.	24242203	DC	Database Management System	20	20	30	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
4.	24242204	DC	Software Engineering	20	20	30	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
5.	24242205	BSC	Calculus and optimization Techniques	20	20	30	30	-	-	100	3	-	-	3	Face to Face	PP	2 Hrs
6.	24242206	DLC	Robot Kinematics Lab	-	-	-	-	70	30	100	-	-	2	1	Experimental	AO	-
7.	24242207	DLC	Database Management System Lab	-	-	-	-	70	30	100	-	-	2	1	Experimental	AO	-
8.	24242208	DLC	Competitive Programming Lab	-	-	-	-	70	30	100	-	-	2	1	Experimental	AO	-
9.	24242209	SP	Semester Proficiency$	-	-	-	-	50	-	50	-	-	2	1	Face to Face	SO	-
10.	24242210	PBL	Macro Project-II#	-	-	-	-	70	30	100	-	-	2	1	Experiential	SO	-
11.	24242211	PC	Professional Certification	-	-	-	-	50	-	50	-	-	2	1	Blended	SO	-
12.	NECXXXXX	NEC	Novel Engaging Course (Activity Based Learning)	-	-	-	-	-	50	50	-	1	-	1	Interactive	SO	-
13.	SIP3XXXX	SIP	Skill Internship Program	-	-	-	-	42	18	60	-	-	-	2**	Experiential	SO	-
			Total	**100**	**100**	**150**	**150**	**422**	**188**	**1110**	**11**	**05**	**12**	**24**	-	-	-
14.	24242212	MAC	Project Management, Economics & Financing	20	20	30	30	-	-	100	2	-	-	GRADE	Blended	MCQ	1.5 Hrs
15.	24242213	MWS	Mandatory Workshop on Computer Vision at Department Level (Duration: Two Days)											GRADE	Interactive	MCQ	-
16.	24242214	MWS	Mandatory Workshop on Life Skills at Department Level (Duration: Two Days)											GRADE	Interactive	MCQ	-

Summer Semester of six-eight week duration will be conducted for makeup of previous semester examination.

Additional Course for Honours or Minor Degree: Permitted to opt for maximum two additional courses for the award of Honours or Minor Degree

$Semester Proficiency– includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in the semester courses

MCQ: Multiple Choice Question   AO: Assignment + Oral   PP: Pen Paper   SO: Submission + Oral   OB: Open Book

#Macro Project-II will be presented and evaluated through an interdisciplinary project evaluation committee.

**These credits will be transferred from the Skill Internship Program.

HSMC	BSC	ESC	DC	DE	SPC	OC	DLC	NEC	SP	SIP	SLP	PDC	PBL	MAC	MWS
0	1	0	4	0	0	0	3	1	1	0	0	0	2	1	2

Mode of Learning					Mode of Examination					Total Credits
Face to Face	Interactive	Blended	Experiential	Experimental	PP	AO	MCQ	OB	SO	
16	1	1	3	3	6	3	9	0	6	24
66	4	4	13	13	25	13	37	0	25	Credits %

NAAC Accredited with A++ Grade
Centre for Artificial Intelligence
Scheme of Evaluation
B. Tech. V Semester *(Information Technology (Artificial Intelligence and Robotics))*

(for batch admitted in academic session 2024-25)

S. No.	Course Code	Category Code	Course Name	Theory Block — Continuous Evaluation — Minor Evaluation I	Theory Block — Continuous Evaluation — Minor Evaluation II	Theory Block — Continuous Evaluation — Quiz/ Assignment	Theory Block — Major Evaluation	Practical Block — Continuous Evaluation — Lab Work & Sessional	Practical Block — Major Evaluation	MOOCs — Exam	MOOCs — Assignment	Total Marks	L	T	P	Total Credits	Mode of Learning	Mode of Major Evaluation	Duration of Major Evaluation
1.	24243101	DC	Theory of Computation	20	20	30	30	-	-	-	-	100	2	1	-	3	Face to Face	PP	2 Hrs
2.	24243102	DC	Cloud Computing and Virtualization	20	20	30	30	-	-	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
3.	24243103	DC	Robot Operating System	20	20	30	30	-	-	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
4.	242431XX	DE	Departmental Elective* (DE-1)	-	-	-	-	-	-	25	75	100	3	-	-	3	Online	MCQ	3 Hrs
5.	242431XX	SPC	Specialization Course (SPC-1)	20	20	30	30	-	-	-	-	100	2	1	-	3	Face to Face	PP	2 Hrs
6.	24243104	DLC	Robot Operating System Lab	-	-	-	-	70	30	-	-	100	-	-	2	1	Experimental	AO	-
7.	24243105	DLC	Cloud Computing and Virtualization Lab	-	-	-	-	70	30	-	-	100	-	-	2	1	Experimental	AO	-
8.	24243106	SP	Semester Proficiency$	-	-	-	-	50	-	-	-	50	-	-	2	1	Face to Face	SO	-
9.	24243107	PBL	Cornerstone Project	-	-	-	-	70	30	-	-	100	-	-	4	2	Experiential	SO	-
			Total	80	80	120	120	260	90	25	75	850	11	04	10	20	-	-	-
10.	24243110	MAC	Supply Chain Management	20	20	30	30	-	-			100	2	-	-	GRADE	Blended	MCQ	1.5 Hrs
11.	24243111	MWS	Mandatory Workshop on Blockchain at Department Level (Duration: Two Days)													GRADE	Interactive	MCQ	-
			Additional Course for Honours or Minor Degree: Permitted to opt for maximum two additional courses for the award of Honours or Minor Degree																

$Semester Proficiency– includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in the semester courses

MCQ: Multiple Choice Question   **AO:** Assignment + Oral   **PP:** Pen Paper   **SO:** Submission + Oral   **OB:** Open Book

* Course run through SWAYAM/NPTEL/ MOOC Learning Based Platform

HSMC	BSC	ESC	DC	DE	SPC	OC	DLC	NEC	SP	SIP	SLP	PDC	PBL	MAC	MWS
0	0	0	3	1	1	0	2	0	1	1	0	0	1	1	1

Mode of Learning					Mode of Examination					Total Credits
Face to Face	Online	Blended	Experiential	Experimental	PP	AO	MCQ	OB	SO	
13	3	0	2	2	6	2	9	0	3	20
65	15	0	10	10	30	10	45	0	15	**Credits %**

Centre for Artificial Intelligence
Scheme of Evaluation

B. Tech. VI Semester *(Information Technology (Artificial Intelligence and Robotics))*

(for batch admitted in academic session 2024-25)

S. No.	Course Code	Category Code	Course Name	Maximum Marks Allotted								Total Marks	Contact Hours per week			Total Credits	Mode of Learning	Mode of Major Evaluation	Duration of Major Evaluation
				Theory Block				Practical Block		MOOCs									
				Continuous Evaluation			Major Evaluation	Continuous Evaluation	Major Evaluation	Exam	Assignment		L	T	P				
				Minor Evaluation I	Minor Evaluation II	Quiz/ Assignment		Lab Work & Sessional											
1.	24243201	DC	AI for Robotics	20	20	30	30	-	-	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
2.	24243202	DC	Image Processing and Computer Vision	20	20	30	30	-	-	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
3.	242432XX	DE	Departmental Elective* (DE-2)	-	-	-	-	-	-	25	75	100	3	-	-	3	Online	MCQ	3 Hrs
4.	242432XX	OC	Open Category Course (OC-1)	20	20	30	30	-	-	-	-	100	2	1	-	3	Face to Face	PP	2 Hrs
5.	242432XX	SPC	Specialization Course (SPC-2)	20	20	30	30	-	-	-	-	100	3	-	-	3	Face to Face	PP	2 Hrs
6.	24243203	DLC	AI for Robotics Lab	-	-	-	-	70	30	-	-	100	-	-	2	1	Experimental	AO	-
7.	24243204	DLC	Image Processing and Computer Vision Lab	-	-	-	-	70	30	-	-	100	-	-	2	1	Experimental	AO	-
8.	24243205	SP	Semester Proficiency$	-	-	-	-	50	-	-	-	50	-	-	2	1	Face to Face	SO	-
9.	24243206	PBL	Capstone Project	-	-	-	-	70	30	-	-	100	-	-	4	2	Experiential	SO	-
			Total	**80**	**80**	**120**	**120**	**260**	**90**	**25**	**75**	**850**	**12**	**03**	**10**	**20**	**-**	**-**	**-**
10.	24243207	MAC	Disaster Management	20	20	30	30	-	-	-	-	100	2	-	-	GRADE	Blended	MCQ	1.5 Hrs
11.	24243208	MWS	Mandatory Workshop on Intellectual Property Rights at Department Level (Duration: Two Days)													GRADE	Interactive	MCQ	-

Skill Enhancement Program/Research Internship/On Job Training for Four weeks duration (Optional)
Summer Semester of six-eight week duration will be conducted for makeup of Previous semester examination.
Additional Course for Honours or Minor Degree: Permitted to opt for maximum two additional courses for the award of Honours or Minor Degree

$Semester Proficiency– includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in the semester courses
MCQ: Multiple Choice Question   AO: Assignment + Oral   PP: Pen Paper   SO: Submission + Oral   OB: Open Book
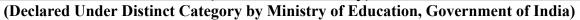* Course run through SWAYAM/NPTEL/ MOOC Learning Based Platform

HSMC	BSC	ESC	DC	DE	SPC	OC	DLC	NEC	SP	SIP	SLP	PDC	PBL	MAC	MWS
0	0	0	2	1	1	1	2	0	1	0	0	0	1	1	1

Mode of Learning					Mode of Examination					Total Credits
Face to Face	Online	Blended	Experiential	Experimental	PP	AO	MCQ	OB	SO	
13	3	0	2	2	6	2	9	0	3	20
65	15	0	10	10	30	10	45	0	15	**Credits %**

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Centre for Artificial Intelligence
Scheme of Evaluation

B. Tech. VII Semester *(Information Technology (Artificial Intelligence and Robotics))*

(for batch admitted in academic session 2024-25)

S. No.	Course Code	Category Code	Course Name	Theory Block Minor Evaluation I	Theory Block Minor Evaluation II	Theory Block Quiz/ Assignment	Theory Block Major Evaluation	Practical Block Continuous Evaluation Lab Work & Sessional	Practical Block Major Evaluation	MOOCs Assignment	MOOCs Exam	Total Marks	L	T	P	Total Credits	Mode of Learning	Mode of Major Evaluation	Duration of Major Evaluation
1.	242441XX	DE	Departmental Elective (DE-3)	20	20	30	30	-	-	-	-	100	3	-	-	**3**	Face to Face	PP	2 Hrs
2.	242441XX	DE	Departmental Elective* (DE-4)	-	-	-	-	-	-	25	75	100	3	-	-	**3**	Online	MCQ	3 Hrs
3.	242441XX	OC	Open Category Course (OC-2)	20	20	30	30	-	-	-	-	100	2	1	-	**3**	Face to Face	PP	2 Hrs
4.	242441XX	SPC	Specialization Course (SPC-3)	20	20	30	30	-	-	-	-	100	2	1	-	**3**	Face to Face	MCQ	2 Hrs
5.	24244101	SP	Semester Proficiency$	-	-	-	-	50	-	-	-	50	-	-	2	**1**	Face to Face	SO	-
6.	24244102	DLC	Creative Problem Solving	-	-	-	-	70	30	-	**-**	100	-	-	2	**1**	Experiential	SO	-
			Total	60	60	90	90	120	30	25	75	550	10	02	04	**14**	-	-	-
7.	24244103	MWS	Mandatory Workshop on Advanced Intellectual Property Rights at Department Level (Duration: Two Days)													**GRADE**	Interactive	MCQ	-

$Semester Proficiency– includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in the semester courses

MCQ: Multiple Choice Question   **AO:** Assignment + Oral   **PP:** Pen Paper   **SO:** Submission + Oral   **OB:** Open Book

* Course run through SWAYAM/NPTEL/ MOOC Learning Based Platform

HSMC	BSC	ESC	DC	DE	SPC	OC	DLC	NEC	SP	SIP	SLP	PDC	PBL	MAC	MWS
0	0	0	0	2	1	1	1	0	1	0	0	0	0	0	1

Mode of Learning Face to Face	Online	Blended	Experiential	Experimental	Mode of Examination PP	AO	MCQ	OB	SO	Total Credits
10	3	0	1	0	6	0	6	0	2	14
71.43	21.43	0	7.14	0	42.86	0	42.86	0	14.28	**Credits %**

Centre for Artificial Intelligence
Scheme of Evaluation

B. Tech. VIII Semester *(Information Technology (Artificial Intelligence and Robotics))*

(for batch admitted in academic session 2024-25)

S. No.	Course Code	Category Code	Course Name	Theory Block				Practical Block		MOOCs		Total Marks	Contact Hours per week			Total Credits	Mode of Learning	Mode of Major Evaluation	Duration of Major Evaluation
				Continuous Evaluation			Major Evaluation	Continuous Evaluation	Major Evaluation	Assignment	Exam		L	T	P				
				Minor Evaluation I	Minor Evaluation II	Quiz/ Assignment													
1.	242442XX	DE	Departmental Elective* (DE-5)	-	-	-	-	-	-	25	75	100	3	-	-	3	Online	MCQ	3 Hrs
2.	242442XX	OC	Open Category Course* (OC-3)	-	-	-	-	-	-	25	75	100	3	-	-	3	Online	MCQ	3 Hrs
3.	24244201	PBL	Industry Internship/ Research Internship/ Innovation & Start-up	-	-	-	-	280	120	-	-	400	-	-	20	10	Experiential	SO	-
4.	24244202	PDC	Professional Development##	-	-	-	-	-	50	-	-	50	-	-	4	2	Interactive	SO	-
			Total	-	-	-	-	280	170	50	150	650	06	-	24	18	-	-	-

Summer Semester of six-eight week duration will be conducted to complete any backlog courses.
Additional Course for Honours or Minor Degree: Permitted to opt for maximum two additional courses for the award of Honours or Minor Degree

MCQ: Multiple Choice Question   **AO:** Assignment + Oral   **PP:** Pen Paper   **SO:** Submission + Oral   **OB:** Open Book

*Course run through SWAYAM/NPTEL/ MOOC Learning Based Platform

Evaluation will be based on participation/laurels brought by the students to the institution in national/state level technical and other events during the complete tenure of the UG programme (participation in professional chapter activities, club activities, cultural events, sports, personality development activities, collaborative events, MOOCs, technical events, institute/department committees, etc.)
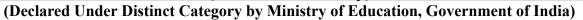
HSMC	BSC	ESC	DC	DE	SPC	OC	DLC	NEC	SP	SIP	SLP	PDC	PBL	MAC	MWS
0	0	0	0	1	0	1	0	0	0	0	0	1	1	0	0

Mode of Learning					Mode of Examination					Total Credits
Interactive	Online	Blended	Experiential	Experimental	PP	AO	MCQ	OB	SO	
2	6	0	10	0	0	0	6	0	12	18
11.11	33.33	0	55.56	0	0	0	33.33	0	66.67	Credits %

Centre for Artificial Intelligence

Semester-Wise General Scheme Structure & Important Guidelines for Flexible Curriculum

(Batch admitted in Academic Session 2024-25 onwards)

Abbreviations Used

L	Lecture
T	Tutorial
P	Practical
HSMC	Humanities and Social Sciences including Management Courses
BSC	Basic Science Courses
ESC	Engineering Science Courses
DC	Departmental Core
DE	Departmental Elective
SPC	Specialization Courses
OC	Open Category
DLC	Departmental Laboratory Courses
MOOC	Massive Open Online Course
MWS	Mandatory Workshop
SP	Semester Proficiency
SIP	Skill Internship Program
SLP	Self-learning Presentation
PDC	Professional Development Component
PBL	Project Based Learning
PC	Professional Certification
MAC	Mandatory Audit Course
NEC	Novel Engaging Course

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Scheme of Evaluation
B. Tech. I Semester *(Artificial Intelligence (AI) and Data Science)*

(for batch admitted in academic session 2024-25)

S. No.	Course Code	Category Code	Course Name	Maximum Marks Allotted						Total Marks	Contact Hours per week			Total Credits	Mode of Learning	Mode of Major Evaluation	Duration of Major Evaluation
				Theory Block				Practical Block									
				Continuous Evaluation			Major Evaluation	Continuous Evaluation	Major Evaluation		L	T	P				
				Minor Evaluation I	Minor Evaluation II	Quiz/ Assignment		Lab Work & Sessional									
1.	27241101	DC	Digital Logic Design	20	20	30	30	-	-	100	3	-	-	3	Face to Face	MCQ	2 Hrs
2.	27241102	DC	Foundations of Data Science	20	20	30	30	-	-	100	2	-	-	2	Face to Face	MCQ	2 Hrs
3.	27241103	DC	Internet and Web Technologies	20	20	30	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
4.	27241104	DC	Problem Solving and Programming	20	20	30	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
5.	27241105	BSC	Linear Algebra	20	20	30	30	-	-	100	3	-	-	3	Face to Face	PP	2 Hrs
6.	27241106	DLC	Problem Solving and Programming Lab	-	-	-	-	70	30	100	-	-	2	1	Experimental	AO	-
7.	27241107	DLC	Internet and Web Technologies Lab	-	-	-	-	70	30	100	-	-	2	1	Experimental	AO	-
8.	27241108	SP	Semester Proficiency$	-	-	-	-	50	-	50	-	-	2	1	Face to Face	SO	-
9.	27241109	PBL	Micro Project-I#	-	-	-	-	70	30	100	-	-	2	1	Experiential	SO	-
10.	27241110	HSMC	Language Lab	-	-	-	-	70	30	100	-	-	2	1	Blended	AO	-
11.	NECXXXXX	NEC	Novel Engaging Course (Activity Based Learning)	-	-	-	-	-	50	50	-	1	-	1	Interactive	SO	-
			Total	**100**	**100**	**150**	**150**	**330**	**170**	**1000**	**12**	**03**	**10**	**20**	**-**	**-**	**-**
12.	27241111	MAC	Universal Human Values & Professional Ethics (UHVPE)	20	20	30	30	-	-	100	2	-	-	GRADE	Blended	MCQ	1.5 Hrs
13.	27241112	MWS	Mandatory Workshop on Indian Constitution and Traditional Knowledge at Department Level (Duration: Two Days)											GRADE	Interactive	MCQ	-
Induction programme of three weeks (MC): Physical activity, Creative Arts, Universal Human Values, Literary, Proficiency Modules, Lectures by Eminent People, Visits to local Areas, Familiarization to Dept./Branch & Innovations.																	
Skill Internship Program (Soft Skill): Minimum 45 hours duration: To be Credited in II Semester.																	

$Semester Proficiency– includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in the semester courses

MCQ: Multiple Choice Question   **AO:** Assignment + Oral   **PP:** Pen Paper   **SO:** Submission + Oral   **OB:** Open Book
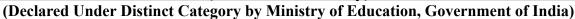
#Micro Project-I will be presented and evaluated through an interdisciplinary project evaluation committee.

HSMC	BSC	ESC	DC	DE	SPC	OC	DLC	NEC	SP	SIP	SLP	PDC	PBL	MAC	MWS
1	1	0	4	0	0	0	2	1	1	0	0	0	1	1	1

| Mode of Learning | | | | | Mode of Examination | | | | | Total Credits |
Face to Face	Interactive	Blended	Experiential	Experimental	PP	AO	MCQ	OB	SO	
15	1	1	1	2	3	3	11	0	3	20
75	5	5	5	10	15	15	55	0	15	**Credits %**

Centre for Artificial Intelligence
Scheme of Evaluation
B. Tech. II Semester *(Artificial Intelligence (AI) and Data Science)*

(for batch admitted in academic session 2024-25)

S. No.	Course Code	Category Code	Course Name	Maximum Marks Allotted						Total Marks	Contact Hours per week			Total Credits	Mode of Learning	Mode of Major Evaluation	Duration of Major Evaluation
				Theory Block				Practical Block			L	T	P				
				Continuous Evaluation			Major Evaluation	Continuous Evaluation	Major Evaluation								
				Minor Evaluation I	Minor Evaluation II	Quiz/ Assignment		Lab Work & Sessional									
1.	27241201	BSC	Discrete Structures	20	20	30	30	-	-	100	3	-	-	3	Face to Face	PP	2 Hrs
2.	27241202	DC	Modern Computer Architecture	20	20	30	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
3.	27241203	DC	Object Oriented Programming	20	20	30	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
4.	27241204	DC	Data Structures	20	20	30	30	-	-	100	2	1	-	3	Face to Face	PP	2 Hrs
5.	27241205	ESC	Basic Electrical & Electronics Engineering	20	20	30	30	-	-	100	2	-	-	2	Face to Face	MCQ	2 Hrs
6.	27241206	DLC	Object Oriented Programming Lab	-	-	-	-	70	30	100	-	-	2	1	Experimental	AO	-
7.	27241207	DLC	Data Structures Lab	-	-	-	-	70	30	100	-	-	2	1	Experimental	AO	-
8.	27241208	DLC	Basic Electrical & Electronics Engineering Lab	-	-	-	-	70	30	100	-	-	2	1	Experimental	AO	-
9.	27241209	SP	Semester Proficiency$	-	-	-	-	50	-	50	-	-	2	1	Face to Face	SO	-
10.	27241210	PBL	Micro Project-II#	-	-	-	-	70	30	100	-	-	2	1	Experiential	SO	-
11.	NECXXXXX	NEC	Novel Engaging Course (Activity Based Learning)	-	-	-	-	-	50	50	-	1	-	1	Interactive	SO	-
12.	SIP1XXXX	SIP	Skill Internship Program (Soft Skill)	-	-	-	-	42	18	60	-	-	-	2**	Experiential	SO	-
			Total	100	100	150	150	372	188	1060	11	04	10	22	-	-	-
13.	27241211	MAC	Sustainability & Environmental Science	20	20	30	30	-	-	100	2	-	-	GRADE	Blended	MCQ	1.5 Hrs
14.	27241212	MWS	Mandatory Workshop on Indian Knowledge System at Department Level (Duration: Two Days)											GRADE	Interactive	MCQ	-
			Summer Semester of six-eight week duration will be conducted for makeup of I & II semester examination.														

$Semester Proficiency– includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in the semester courses

MCQ: Multiple Choice Question   **AO:** Assignment + Oral   **PP:** Pen Paper   **SO:** Submission + Oral   **OB:** Open Book

**These credits will be transferred from the Skill Internship Program (Soft Skill).

#Micro Project-II will be presented and evaluated through an interdisciplinary project evaluation committee.

HSMC	BSC	ESC	DC	DE	SPC	OC	DLC	NEC	SP	SIP	SLP	PDC	PBL	MAC	MWS
0	1	0	3	0	0	0	3	1	1	0	0	0	1	1	1

Mode of Learning					Mode of Examination					Total Credits
Face to Face	Interactive	Blended	Experiential	Experimental	PP	AO	MCQ	OB	SO	
15	1	0	3	3	6	3	8	0	5	22
68	4	0	14	14	27	14	36	0	23	Credits %

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Centre for Artificial Intelligence
Scheme of Evaluation
B. Tech. III Semester *(Artificial Intelligence (AI) and Data Science)*

(for batch admitted in academic session 2024-25)

S. No.	Course Code	Category Code	Course Name	Theory Block — Continuous Evaluation — Minor Evaluation I	Theory Block — Continuous Evaluation — Minor Evaluation II	Theory Block — Continuous Evaluation — Quiz/Assignment	Theory Block — Major Evaluation	Practical Block — Continuous Evaluation — Lab Work & Sessional	Practical Block — Major Evaluation	Total Marks	L	T	P	Total Credits	Mode of Learning	Mode of Major Evaluation	Duration of Major Evaluation
1.	27242101	BSC	Probability and Random Processes	20	20	30	30	-	-	100	3	1	-	4	Face to Face	PP	2 Hrs
2.	27242102	DC	Design & Analysis of Algorithms	20	20	30	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
3.	27242103	DC	Database Management System	20	20	30	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
4.	27242104	DC	Computer Networks	20	20	30	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
5.	27242105	DC	Operating Systems	20	20	30	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
6.	27242106	DLC	Problem Solving through Python Programming	-	-	-	-	70	30	100	-	-	2	1	Experimental	AO	-
7.	27242107	DLC	Design & Analysis of Algorithms Lab	-	-	-	-	70	30	100	-	-	2	1	Experimental	AO	-
8.	27242108	SP	Semester Proficiency$	-	-	-	-	50	-	50	-	-	2	1	Face to Face	SO	-
9.	27242109	PBL	Macro Project-I# [Database Management System Lab]	-	-	-	-	70	30	100	-	-	2	1	Experiential	SO	-
10.	27242110	SLP	Self-learning/Presentation$$$ (SWAYAM/NPTEL/MOOC)	-	-	-	-	40	-	40	-	-	2	1	Mentoring	SO	-
11.	NECXXXXX	NEC	Novel Engaging Course (Activity Based Learning)	-	-	-	-	-	50	50	-	1	-	1	Interactive	SO	-
			Total	**100**	**100**	**150**	**150**	**300**	**140**	**940**	**11**	**06**	**10**	**22**	**-**	**-**	**-**
12.	27242111	MAC	Cyber Security	20	20	30	30	-	-	100	2	-	-	GRADE	Blended	MCQ	1.5 Hrs
13.	27242112	MWS	Mandatory Workshop on Internet of Things(IoT) at Department Level (Duration: Two Days)											GRADE	Interactive	MCQ	-

Skill Internship Program (Institute Level) (Qualifier): Minimum 30 hours duration: To be Credited in IV Semester

$Semester Proficiency– includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in the semester courses

MCQ: Multiple Choice Question   **AO:** Assignment + Oral   **PP:** Pen Paper   **SO:** Submission + Oral   **OB:** Open Book

#Macro Project-I will be presented and evaluated through an interdisciplinary project evaluation committee.

$$$Compulsory registration for one online course using SWAYAM/NPTEL/ MOOC, evaluation through attendance and presentation.

HSMC	BSC	ESC	DC	DE	SPC	OC	DLC	NEC	SP	SIP	SLP	PDC	PBL	MAC	MWS
0	1	0	4	0	0	0	2	1	1	1	1	0	1	1	1

Mode of Learning						Mode of Examination					Total Credits
Face to Face	Interactive	Blended	Mentoring	Experiential	Experimental	PP	AO	MCQ	OB	SO	
17	1	0	1	1	2	4	2	12	0	4	22
78	4	0	4	4	10	18	9	55	0	18	**Credits %**

Centre for Artificial Intelligence
Scheme of Evaluation
B. Tech. IV Semester *(Artificial Intelligence (AI) and Data Science)*

(for batch admitted in academic session 2024-25)

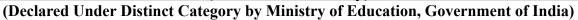| S. No.	Course Code	Category Code	Course Name	Maximum Marks Allotted						Total Marks	Contact Hours per week			Total Credits	Mode of Learning	Mode of Major Evaluation	Duration of Major Evaluation
				Theory Block				Practical Block			L	T	P				
				Continuous Evaluation			Major Evaluation	Continuous Evaluation	Major Evaluation								
				Minor Evaluation I	Minor Evaluation II	Quiz/ Assignment		Lab Work & Sessional									
1.	27242201	DC	Data Science	20	20	30	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
2.	27242202	DC	Theory of Computation	20	20	30	30	-	-	100	2	1	-	3	Face to Face	PP	2 Hrs
3.	27242203	DC	Software Engineering	20	20	30	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
4.	27242204	DC	Network and Web Security	20	20	30	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
5.	27242205	BSC	Calculus and optimization Techniques	20	20	30	30	-	-	100	3	-	-	3	Face to Face	PP	2 Hrs
6.	27242206	DLC	Data Science Lab	-	-	-	-	70	30	100	-	-	2	1	Experimental	AO	-
7.	27242207	DLC	Java Programming Lab	-	-	-	-	70	30	100	-	-	2	1	Experimental	AO	-
8.	27242208	DLC	Competitive Programming Lab	-	-	-	-	70	30	100	-	-	2	1	Experimental	AO	-
9.	27242209	SP	Semester Proficiency$	-	-	-	-	50	-	50	-	-	2	1	Face to Face	SO	-
10.	27242210	PBL	Macro Project-II#	-	-	-	-	70	30	100	-	-	2	1	Experiential	SO	-
11.	27242211	PC	Professional Certification	-	-	-	-	50	-	50	-	-	2	1	Blended	SO	-
12.	NECXXXXX	NEC	Novel Engaging Course (Activity Based Learning)	-	-	-	-	-	50	50	-	1	-	1	Interactive	SO	-
13.	SIP3XXXX	SIP	Skill Internship Program	-	-	-	-	42	18	60	-	-	-	2**	Experiential	SO	-
			Total	100	100	150	150	422	188	1110	11	05	12	24	-	-	-
14.	27242212	MAC	Project Management, Economics & Financing	20	20	30	30	-	-	100	2	-	-	GRADE	Blended	MCQ	1.5 Hrs
15.	27242213	MWS	Mandatory Workshop on Computer Vision at Department Level (Duration: Two Days)											GRADE	Interactive	MCQ	-
16.	27242214	MWS	Mandatory Workshop on Life Skills at Department Level (Duration: Two Days)											GRADE	Interactive	MCQ	-
			Summer Semester of six-eight week duration will be conducted for makeup of previous semester examination.														
			Additional Course for Honours or Minor Degree: Permitted to opt for maximum two additional courses for the award of Honours or Minor Degree														

$Semester Proficiency– includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in the semester courses

MCQ: Multiple Choice Question   **AO:** Assignment + Oral   **PP:** Pen Paper   **SO:** Submission + Oral   **OB:** Open Book

#Macro Project-II will be presented and evaluated through an interdisciplinary project evaluation committee.

**These credits will be transferred from the Skill Internship Program.

HSMC	BSC	ESC	DC	DE	SPC	OC	DLC	NEC	SP	SIP	SLP	PDC	PBL	MAC	MWS
0	1	0	4	0	0	0	3	1	1	0	0	0	2	1	2

Mode of Learning					Mode of Examination					Total Credits
Face to Face	Interactive	Blended	Experiential	Experimental	PP	AO	MCQ	OB	SO	
16	1	1	3	3	6	3	9	0	6	24
66	4	4	13	13	25	13	37	0	25	Credits %

Centre for Artificial Intelligence
Scheme of Evaluation
B. Tech. V Semester *(Artificial Intelligence (AI) and Data Science)*

(for batch admitted in academic session 2024-25)

S. No.	Course Code	Category Code	Course Name	Maximum Marks Allotted								Total Marks	Contact Hours per week			Total Credits	Mode of Learning	Mode of Major Evaluation	Duration of Major Evaluation
				Theory Block				Practical Block		MOOCs									
				Continuous Evaluation			Major Evaluation	Continuous Evaluation	Major Evaluation	Exam	Assignment		L	T	P				
				Minor Evaluation I	Minor Evaluation II	Quiz/ Assignment		Lab Work & Sessional											
1.	27243101	DC	Data Mining and Warehousing	20	20	30	30	-	-	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
2.	27243102	DC	Cloud Computing & Virtualization	20	20	30	30	-	-	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
3.	27243103	DC	Soft Computing Techniques	20	20	30	30	-	-	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
4.	272431XX	DE	Departmental Elective* (DE-1)	-	-	-	-	-	-	25	75	100	3	-	-	3	Online	MCQ	3 Hrs
5.	272431XX	SPC	Specialization Course (SPC-1)	20	20	30	30	-	-	-	-	100	2	1	-	3	Face to Face	PP	2 Hrs
6.	27243104	DLC	Data Mining and Warehousing Lab	-	-	-	-	70	30	-	-	100	-	-	2	1	Experimental	AO	-
7.	27243105	DLC	Cloud Computing & Virtualization Lab	-	-	-	-	70	30	-	-	100	-	-	2	1	Experimental	AO	-
8.	27243106	SP	Semester Proficiency$	-	-	-	-	50	-	-	-	50	-	-	2	1	Face to Face	SO	-
9.	27243107	PBL	Cornerstone Project	-	-	-	-	70	30	-	-	100	-	-	4	2	Experiential	SO	-
			Total	80	80	120	120	260	90	25	75	850	11	04	10	20	-	-	-
10.	27243108	MAC	Supply Chain Management	20	20	30	30	-	-			100	2	-	-	GRADE	Blended	MCQ	1.5 Hrs
11.	27243109	MWS	Mandatory Workshop on Blockchain at Department Level (Duration: Two Days)													GRADE	Interactive	MCQ	-

Additional Course for Honours or Minor Degree: Permitted to opt for maximum two additional courses for the award of Honours or Minor Degree

$Semester Proficiency– includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in the semester courses

MCQ: Multiple Choice Question   **AO:** Assignment + Oral   **PP:** Pen Paper   **SO:** Submission + Oral   **OB:** Open Book

* Course run through SWAYAM/NPTEL/ MOOC Learning Based Platform

HSMC	BSC	ESC	DC	DE	SPC	OC	DLC	NEC	SP	SIP	SLP	PDC	PBL	MAC	MWS
0	0	0	3	1	1	0	2	0	1	1	0	0	1	1	1

Mode of Learning					Mode of Examination					Total Credits
Face to Face	Online	Blended	Experiential	Experimental	PP	AO	MCQ	OB	SO	
13	3	0	2	2	3	2	12	0	3	20
65	15	0	10	10	15	10	60	0	15	Credits %

Centre for Artificial Intelligence
Scheme of Evaluation
B. Tech. VI Semester *(Artificial Intelligence (AI) and Data Science)*

(for batch admitted in academic session 2024-25)

S. No.	Course Code	Category Code	Course Name	Theory Block — Continuous Evaluation — Minor Evaluation I	Minor Evaluation II	Quiz/ Assignment	Major Evaluation	Practical Block — Continuous Evaluation — Lab Work & Sessional	Major Evaluation	MOOCs — Exam	Assignment	Total Marks	L	T	P	Total Credits	Mode of Learning	Mode of Major Evaluation	Duration of Major Evaluation
1.	27243201	DC	Deep Learning	20	20	30	30	-	-	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
2.	27243202	DC	Big Data Analytics	20	20	30	30	-	-	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
3.	272432XX	DE	Departmental Elective* (DE-2)	-	-	-	-	-	-	25	75	100	3	-	-	3	Online	MCQ	3 Hrs
4.	272432XX	OC	Open Category Course (OC-1)	20	20	30	30	-	-	-	-	100	2	1	-	3	Face to Face	PP	2 Hrs
5.	272432XX	SPC	Specialization Course (SPC-2)	20	20	30	30	-	-	-	-	100	3	-	-	3	Face to Face	PP	2 Hrs
6.	27243203	DLC	Data Handling and Visualization Lab	-	-	-	-	70	30	-	-	100	-	-	2	1	Experimental	AO	-
7.	27243204	DLC	Deep Learning Lab	-	-	-	-	70	30	-	-	100	-	-	2	1	Experimental	AO	-
8.	27243205	SP	Semester Proficiency$	-	-	-	-	50	-	-	-	50	-	-	2	1	Face to Face	SO	-
9.	27243206	PBL	Capstone Project	-	-	-	-	70	30	-	-	100	-	-	4	2	Experiential	SO	-
			Total	80	80	120	120	260	90	25	75	850	12	03	10	20	-	-	-
10.	27243207	MAC	Disaster Management	20	20	30	30	-	-	-	-	100	2	-	-	GRADE	Blended	MCQ	1.5 Hrs
11.	27243208	MWS	Mandatory Workshop on Intellectual Property Rights at Department Level (Duration: Two Days)													GRADE	Interactive	MCQ	-
			Skill Enhancement Program/Research Internship/On Job Training for Four weeks duration **(Optional)**																
			Summer Semester of six-eight week duration will be conducted for makeup of Previous semester examination.																
			Additional Course for Honours or Minor Degree: Permitted to opt for maximum two additional courses for the award of Honours or Minor Degree																

$Semester Proficiency– includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in the semester courses
MCQ: Multiple Choice Question   **AO:** Assignment + Oral   **PP:** Pen Paper   **SO:** Submission + Oral   **OB:** Open Book
* Course run through SWAYAM/NPTEL/ MOOC Learning Based Platform

HSMC	BSC	ESC	DC	DE	SPC	OC	DLC	NEC	SP	SIP	SLP	PDC	PBL	MAC	MWS
0	0	0	2	1	1	1	2	0	1	0	0	0	1	1	1

Mode of Learning					Mode of Examination					Total Credits
Face to Face	Online	Blended	Experiential	Experimental	PP	AO	MCQ	OB	SO	
13	3	0	2	2	6	2	9	0	3	20
65	15	0	10	10	30	10	45	0	15	**Credits %**

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR
(Deemed University)
(Declared Under Distinct Category by Ministry of Education, Government of India)
NAAC Accredited with A++ Grade
Centre for Artificial Intelligence
Scheme of Evaluation
B. Tech. VII Semester *(Artificial Intelligence (AI) and Data Science)*

(for batch admitted in academic session 2024-25)

S. No.	Course Code	Category Code	Course Name	Theory Block Continuous Evaluation Minor Evaluation I	Minor Evaluation II	Quiz/ Assignment	Major Evaluation	Practical Block Continuous Evaluation Lab Work & Sessional	Major Evaluation	MOOCs Assignment	Exam	Total Marks	L	T	P	Total Credits	Mode of Learning	Mode of Major Evaluation	Duration of Major Evaluation
1.	272441XX	DE	Departmental Elective (DE-3)	20	20	30	30	-	-	-	-	100	3	-	-	3	Face to Face	PP	2 Hrs
2.	272441XX	DE	Departmental Elective* (DE-4)	-	-	-	-	-	-	25	75	100	3	-	-	3	Online	MCQ	3 Hrs
3.	272441XX	OC	Open Category Course (OC-2)	20	20	30	30	-	-	-	-	100	2	1	-	3	Face to Face	PP	2 Hrs
4.	272441XX	SPC	Specialization Course (SPC-3)	20	20	30	30	-	-	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
5.	27244101	SP	Semester Proficiency$	-	-	-	-	50	-	-	-	50	-	-	2	1	Face to Face	SO	-
6.	27244102	DLC	Creative Problem Solving	-	-	-	-	70	30	-	–	100	-	-	2	1	Experiential	SO	-
			Total	60	60	90	90	120	30	25	75	550	10	02	04	14	-	-	-
7.	27244103	MWS	Mandatory Workshop on Advanced Intellectual Property Rights at Department Level (Duration: Two Days)													GRADE	Interactive	MCQ	-

$Semester Proficiency– includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in the semester courses

MCQ: Multiple Choice Question   **AO:** Assignment + Oral   **PP:** Pen Paper   **SO:** Submission + Oral   **OB:** Open Book
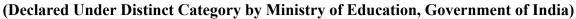
* Course run through SWAYAM/NPTEL/ MOOC Learning Based Platform

HSMC	BSC	ESC	DC	DE	SPC	OC	DLC	NEC	SP	SIP	SLP	PDC	PBL	MAC	MWS
0	0	0	0	2	1	1	1	0	1	0	0	0	0	0	1

Mode of Learning					Mode of Examination					Total Credits
Face to Face	Online	Blended	Experiential	Experimental	PP	AO	MCQ	OB	SO	
10	3	0	1	0	6	0	6	0	2	14
71.43	21.43	0	7.14	0	42.86	0	42.86	0	14.28	Credits %

Centre for Artificial Intelligence
Scheme of Evaluation
B. Tech. VIII Semester *(Artificial Intelligence (AI) and Data Science)*

(for batch admitted in academic session 2024-25)

S. No.	Course Code	Category Code	Course Name	Maximum Marks Allotted								Total Marks	Contact Hours per week			Total Credits	Mode of Learning	Mode of Major Evaluation	Duration of Major Evaluation
				Theory Block				Practical Block		MOOCs			L	T	P				
				Continuous Evaluation			Major Evaluation	Continuous Evaluation	Major Evaluation	Assignment	Exam								
				Minor Evaluation I	Minor Evaluation II	Quiz/ Assignment													
1.	272442XX	DE	Departmental Elective* (DE-5)	-	-	-	-	-	-	25	75	100	3	-	-	3	Online	MCQ	3 Hrs
2.	272442XX	OC	Open Category Course* (OC-3)	-	-	-	-	-	-	25	75	100	3	-	-	3	Online	MCQ	3 Hrs
3.	27244201	PBL	Industry Internship/ Research Internship/ Innovation & Start-up	-	-	-	-	280	120	-	-	400	-	-	20	10	Experiential	SO	-
4.	27244202	PDC	Professional Development##	-	-	-	-	-	50	-	-	50	-	-	4	2	Interactive	SO	-
			Total	-	-	-	-	280	170	50	150	650	06	-	24	18	-	-	-
			Summer Semester of six-eight week duration will be conducted to complete any backlog courses.																
			Additional Course for Honours or Minor Degree: Permitted to opt for maximum two additional courses for the award of Honours or Minor Degree																

MCQ: Multiple Choice Question   **AO:** Assignment + Oral   **PP:** Pen Paper   **SO:** Submission + Oral   **OB:** Open Book

*Course run through SWAYAM/NPTEL/ MOOC Learning Based Platform

Evaluation will be based on participation/laurels brought by the students to the institution in national/state level technical and other events during the complete tenure of the UG programme (participation in professional chapter activities, club activities, cultural events, sports, personality development activities, collaborative events, MOOCs, technical events, institute/department committees, etc.)
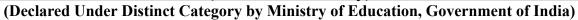
HSMC	BSC	ESC	DC	DE	SPC	OC	DLC	NEC	SP	SIP	SLP	PDC	PBL	MAC	MWS
0	0	0	0	1	0	1	0	0	0	0	0	1	1	0	0

Mode of Learning					Mode of Examination					Total Credits
Interactive	Online	Blended	Experiential	Experimental	PP	AO	MCQ	OB	SO	
2	6	0	10	0	0	0	6	0	12	18
11.11	33.33	0	55.56	0	0	0	33.33	0	66.67	Credits %

Centre for Artificial Intelligence

Semester-Wise General Scheme Structure & Important Guidelines for Flexible Curriculum

(Batch admitted in Academic Session 2024-25 onwards)

Abbreviations Used

L	Lecture
T	Tutorial
P	Practical
HSMC	Humanities and Social Sciences including Management Courses
BSC	Basic Science Courses
ESC	Engineering Science Courses
DC	Departmental Core
DE	Departmental Elective
SPC	Specialization Courses
OC	Open Category
DLC	Departmental Laboratory Courses
MOOC	Massive Open Online Course
MWS	Mandatory Workshop
SP	Semester Proficiency
SIP	Skill Internship Program
SLP	Self-learning Presentation
PDC	Professional Development Component
PBL	Project Based Learning
PC	Professional Certification
MAC	Mandatory Audit Course
NEC	Novel Engaging Course

Centre for Artificial Intelligence

Scheme of Evaluation
B. Tech. I Semester *(Artificial Intelligence (AI) and Machine Learning)*

(for batch admitted in academic session 2024-25)

S. No.	Course Code	Category Code	Course Name	Theory Block — Continuous Evaluation — Minor Evaluation I	Minor Evaluation II	Quiz/ Assignment	Major Evaluation	Practical Block — Continuous Evaluation — Lab Work & Sessional	Major Evaluation	Total Marks	L	T	P	Total Credits	Mode of Learning	Mode of Major Evaluation	Duration of Major Evaluation
1.	28241101	DC	Digital Logic Design	20	20	30	30	-	-	100	3	-	-	3	Face to Face	MCQ	2 Hrs
2.	28241102	DC	Foundations of Machine Learning	20	20	30	30	-	-	100	2	-	-	2	Face to Face	MCQ	2 Hrs
3.	28241103	DC	Internet and Web Technologies	20	20	30	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
4.	28241104	DC	Problem Solving and Programming	20	20	30	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
5.	28241105	BSC	Linear Algebra	20	20	30	30	-	-	100	3	-	-	3	Face to Face	PP	2 Hrs
6.	28241106	DLC	Problem Solving and Programming Lab	-	-	-	-	70	30	100	-	-	2	1	Experimental	AO	-
7.	28241107	DLC	Internet and Web Technologies Lab	-	-	-	-	70	30	100	-	-	2	1	Experimental	AO	-
8.	28241108	SP	Semester Proficiency$	-	-	-	-	50	-	50	-	-	2	1	Face to Face	SO	-
9.	28241109	PBL	Micro Project-I#	-	-	-	-	70	30	100	-	-	2	1	Experiential	SO	-
10.	28241110	HSMC	Language Lab	-	-	-	-	70	30	100	-	-	2	1	Blended	AO	-
11.	NECXXXXX	NEC	Novel Engaging Course (Activity Based Learning)	-	-	-	-	-	50	50	-	1	-	1	Interactive	SO	-
			Total	**100**	**100**	**150**	**150**	**330**	**170**	**1000**	**12**	**03**	**10**	**20**	**-**	**-**	**-**
12.	28241111	MAC	Universal Human Values & Professional Ethics (UHVPE)	20	20	30	30	-	-	100	2	-	-	GRADE	Blended	MCQ	1.5 Hrs
13.	28241112	MWS	Mandatory Workshop on Indian Constitution and Traditional Knowledge at Department Level (Duration: Two Days)											GRADE	Interactive	MCQ	-
Induction programme of three weeks (MC): Physical activity, Creative Arts, Universal Human Values, Literary, Proficiency Modules, Lectures by Eminent People, Visits to local Areas, Familiarization to Dept./Branch & Innovations.																	
Skill Internship Program (Soft Skill): Minimum 45 hours duration: To be Credited in II Semester.																	

$Semester Proficiency– includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in the semester courses

MCQ: Multiple Choice Question   **AO:** Assignment + Oral   **PP:** Pen Paper   **SO:** Submission + Oral   **OB:** Open Book

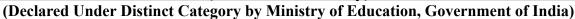#Micro Project-I will be presented and evaluated through an interdisciplinary project evaluation committee.

HSMC	BSC	ESC	DC	DE	SPC	OC	DLC	NEC	SP	SIP	SLP	PDC	PBL	MAC	MWS
1	1	0	4	0	0	0	2	1	1	0	0	0	1	1	1

Mode of Learning					Mode of Examination					Total Credits
Face to Face	Interactive	Blended	Experiential	Experimental	PP	AO	MCQ	OB	SO	
15	1	1	1	2	3	3	11	0	3	20
75	5	5	5	10	15	15	55	0	15	**Credits %**

Centre for Artificial Intelligence
Scheme of Evaluation
B. Tech. II Semester *(Artificial Intelligence (AI) and Machine Learning)*

(for batch admitted in academic session 2024-25)

S. No.	Course Code	Category Code	Course Name	Continuous Evaluation — Minor Evaluation I	Continuous Evaluation — Minor Evaluation II	Continuous Evaluation — Quiz/Assignment	Major Evaluation	Continuous Evaluation Lab Work & Sessional	Major Evaluation	Total Marks	L	T	P	Total Credits	Mode of Learning	Mode of Major Evaluation	Duration of Major Evaluation
1.	28241201	BSC	Discrete Structures	20	20	30	30	-	-	100	3	-	-	3	Face to Face	PP	2 Hrs
2.	28241202	DC	Modern Computer Architecture	20	20	30	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
3.	28241203	DC	Object Oriented Programming	20	20	30	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
4.	28241204	DC	Data Structures	20	20	30	30	-	-	100	2	1	-	3	Face to Face	PP	2 Hrs
5.	28241205	ESC	Basic Electrical & Electronics Engineering	20	20	30	30	-	-	100	2	-	-	2	Face to Face	MCQ	2 Hrs
6.	28241206	DLC	Object Oriented Programming Lab	-	-	-	-	70	30	100	-	-	2	1	Experimental	AO	-
7.	28241207	DLC	Data Structures Lab	-	-	-	-	70	30	100	-	-	2	1	Experimental	AO	-
8.	28241208	DLC	Basic Electrical & Electronics Engineering Lab	-	-	-	-	70	30	100	-	-	2	1	Experimental	AO	-
9.	28241209	SP	Semester Proficiency$	-	-	-	-	50	-	50	-	-	2	1	Face to Face	SO	-
10.	28241210	PBL	Micro Project-II#	-	-	-	-	70	30	100	-	-	2	1	Experiential	SO	-
11.	NECXXXXX	NEC	Novel Engaging Course (Activity Based Learning)	-	-	-	-	-	50	50	-	1	-	1	Interactive	SO	-
12.	SIP1XXXX	SIP	Skill Internship Program (Soft Skill)	-	-	-	-	42	18	60	-	-	-	2**	Experiential	SO	-
			Total	100	100	150	150	372	188	1060	11	04	10	22	-	-	-
13.	28241211	MAC	Sustainability & Environmental Science	20	20	30	30	-	-	100	2	-	-	GRADE	Blended	MCQ	1.5 Hrs
14.	28241212	MWS	Mandatory Workshop on Indian Knowledge System at Department Level (Duration: Two Days)											GRADE	Interactive	MCQ	-

Summer Semester of six-eight week duration will be conducted for makeup of I & II semester examination.

$Semester Proficiency– includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in the semester courses

MCQ: Multiple Choice Question   **AO:** Assignment + Oral   **PP:** Pen Paper   **SO:** Submission + Oral   **OB:** Open Book

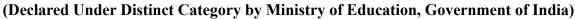**These credits will be transferred from the Skill Internship Program (Soft Skill).

#Micro Project-II will be presented and evaluated through an interdisciplinary project evaluation committee.

HSMC	BSC	ESC	DC	DE	SPC	OC	DLC	NEC	SP	SIP	SLP	PDC	PBL	MAC	MWS
0	1	1	3	0	0	0	3	1	1	0	0	0	1	1	1

Mode of Learning					Mode of Examination					Total Credits
Face to Face	Interactive	Blended	Experiential	Experimental	PP	AO	MCQ	OB	SO	
15	1	0	3	3	6	3	8	0	5	22
68	4	0	14	14	27	14	36	0	23	Credits %

Centre for Artificial Intelligence
Scheme of Evaluation
B. Tech. III Semester *(Artificial Intelligence (AI) and Machine Learning)*

(for batch admitted in academic session 2024-25)

S. No.	Course Code	Category Code	Course Name	Theory Block – Continuous Evaluation – Minor Evaluation I	Minor Evaluation II	Quiz/ Assignment	Major Evaluation	Practical Block – Continuous Evaluation – Lab Work & Sessional	Major Evaluation	Total Marks	L	T	P	Total Credits	Mode of Learning	Mode of Major Evaluation	Duration of Major Evaluation
1.	28242101	BSC	Probability and Random Processes	20	20	30	30	-	-	100	3	1	-	4	Face to Face	PP	2 Hrs
2.	28242102	DC	Design & Analysis of Algorithms	20	20	30	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
3.	28242103	DC	Database Management System	20	20	30	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
4.	28242104	DC	Computer Networks	20	20	30	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
5.	28242105	DC	Operating Systems	20	20	30	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
6.	28242106	DLC	Problem Solving through Python Programming	-	-	-	-	70	30	100	-	-	2	1	Experimental	AO	-
7.	28242107	DLC	Design & Analysis of Algorithms Lab	-	-	-	-	70	30	100	-	-	2	1	Experimental	AO	-
8.	28242108	SP	Semester Proficiency$	-	-	-	-	50	-	50	-	-	2	1	Face to Face	SO	-
9.	28242109	PBL	Macro Project-I# [Database Management System Lab]	-	-	-	-	70	30	100	-	-	2	1	Experiential	SO	-
10.	28242110	SLP	Self-learning/Presentation$$$ (SWAYAM/NPTEL/MOOC)	-	-	-	-	40	-	40	-	-	2	1	Mentoring	SO	-
11.	NECXXXXX	NEC	Novel Engaging Course (Activity Based Learning)	-	-	-	-	-	50	50	-	1	-	1	Interactive	SO	-
			Total	**100**	**100**	**150**	**150**	**300**	**140**	**940**	**11**	**06**	**10**	**22**	-	-	-
12.	28242111	MAC	Cyber Security	20	20	30	30	-	-	100	2	-	-	GRADE	Blended	MCQ	1.5 Hrs
13.	28242112	MWS	Mandatory Workshop on Internet of Things(IoT) at Department Level (Duration: Two Days)											GRADE	Interactive	MCQ	-

Skill Internship Program (Institute Level) (Qualifier): Minimum 30 hours duration: To be Credited in IV Semester

$Semester Proficiency– includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in the semester courses

MCQ: Multiple Choice Question   **AO:** Assignment + Oral   **PP:** Pen Paper   **SO:** Submission + Oral   **OB:** Open Book

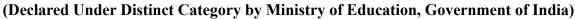#Macro Project-I will be presented and evaluated through an interdisciplinary project evaluation committee.

$$$Compulsory registration for one online course using SWAYAM/NPTEL/ MOOC, evaluation through attendance and presentation.

HSMC	BSC	ESC	DC	DE	SPC	OC	DLC	NEC	SP	SIP	SLP	PDC	PBL	MAC	MWS
0	1	0	4	0	0	0	2	1	1	1	1	0	1	1	1

Mode of Learning						Mode of Examination					Total Credits
Face to Face	Interactive	Blended	Mentoring	Experiential	Experimental	PP	AO	MCQ	OB	SO	
17	1	0	1	1	2	4	2	12	0	4	22
78	4	0	4	4	10	18	9	55	0	18	**Credits %**

NAAC Accredited with A++ Grade

Centre for Artificial Intelligence
Scheme of Evaluation
B. Tech. IV Semester *(Artificial Intelligence (AI) and Machine Learning)*

(for batch admitted in academic session 2024-25)

S. No.	Course Code	Category Code	Course Name	Theory Block — Continuous Evaluation — Minor Evaluation I	Minor Evaluation II	Quiz/ Assignment	Major Evaluation	Practical Block — Continuous Evaluation — Lab Work & Sessional	Major Evaluation	Total Marks	L	T	P	Total Credits	Mode of Learning	Mode of Major Evaluation	Duration of Major Evaluation
1.	28242201	DC	Machine Learning	20	20	30	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
2.	28242202	DC	Theory of Computation	20	20	30	30	-	-	100	2	1	-	3	Face to Face	PP	2 Hrs
3.	28242203	DC	Software Engineering	20	20	30	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
4.	28242204	DC	Network and Web Security	20	20	30	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
5.	28242205	BSC	Calculus and optimization Techniques	20	20	30	30	-	-	100	3	-	-	3	Face to Face	PP	2 Hrs
6.	28242206	DLC	Machine Learning Lab	-	-	-	-	70	30	100	-	-	2	1	Experimental	AO	-
7.	28242207	DLC	Java Programming Lab	-	-	-	-	70	30	100	-	-	2	1	Experimental	AO	-
8.	28242208	DLC	Competitive Programming Lab	-	-	-	-	70	30	100	-	-	2	1	Experimental	AO	-
9.	28242209	SP	Semester Proficiency$	-	-	-	-	50	-	50	-	-	2	1	Face to Face	SO	-
10.	28242210	PBL	Macro Project-II#	-	-	-	-	70	30	100	-	-	2	1	Experiential	SO	-
11.	28242211	PC	Professional Certification	-	-	-	-	50	-	50	-	-	2	1	Blended	SO	-
12.	NECXXXXX	NEC	Novel Engaging Course (Activity Based Learning)	-	-	-	-	-	50	50	-	1	-	1	Interactive	SO	-
13.	SIP3XXXX	SIP	Skill Internship Program	-	-	-	-	42	18	60	-	-	-	2**	Experiential	SO	-
			Total	100	100	150	150	422	188	1110	11	05	12	24	-	-	-
14.	28242212	MAC	Project Management, Economics & Financing	20	20	30	30	-	-	100	2	-	-	GRADE	Blended	MCQ	1.5 Hrs
15.	28242213	MWS	Mandatory Workshop on Computer Vision at Department Level (Duration: Two Days)											GRADE	Interactive	MCQ	-
16.	28242214	MWS	Mandatory Workshop on Life Skills at Department Level (Duration: Two Days)											GRADE	Interactive	MCQ	-

Summer Semester of six-eight week duration will be conducted for makeup of previous semester examination.

Additional Course for Honours or Minor Degree: Permitted to opt for maximum two additional courses for the award of Honours or Minor Degree

$Semester Proficiency– includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in the semester courses

MCQ: Multiple Choice Question   AO: Assignment + Oral   PP: Pen Paper   SO: Submission + Oral   OB: Open Book

#Macro Project-II will be presented and evaluated through an interdisciplinary project evaluation committee.

**These credits will be transferred from the Skill Internship Program.

HSMC	BSC	ESC	DC	DE	SPC	OC	DLC	NEC	SP	SIP	SLP	PDC	PBL	MAC	MWS
0	1	0	4	0	0	0	3	1	1	0	0	0	2	1	2

Mode of Learning					Mode of Examination					Total Credits
Face to Face	Interactive	Blended	Experiential	Experimental	PP	AO	MCQ	OB	SO	
16	1	1	3	3	6	3	9	0	6	24
66	4	4	13	13	25	13	37	0	25	Credits %

Centre for Artificial Intelligence
Scheme of Evaluation
B. Tech. V Semester *(Artificial Intelligence (AI) and Machine Learning)*

(for batch admitted in academic session 2024-25)

S. No.	Course Code	Category Code	Course Name	Theory Block Minor Evaluation I	Theory Block Minor Evaluation II	Theory Block Quiz/ Assignment	Theory Block Major Evaluation	Practical Block Continuous Evaluation Lab Work & Sessional	Practical Block Major Evaluation	MOOCs Exam	MOOCs Assignment	Total Marks	L	T	P	Total Credits	Mode of Learning	Mode of Major Evaluation	Duration of Major Evaluation
1.	28243101	DC	Optimization Techniques in Machine Learning	20	20	30	30	-	-	-	-	100	2	1	-	3	Face to Face	PP	2 Hrs
2.	28243102	DC	Cloud Computing & Big Data	20	20	30	30	-	-	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
3.	28243103	DC	Soft Computing Techniques	20	20	30	30	-	-	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
4.	282431XX	DE	Departmental Elective* (DE-1)	-	-	-	-	-	-	25	75	100	3	-	-	3	Online	MCQ	3 Hrs
5.	282431XX	SPC	Specialization Course (SPC-1)	20	20	30	30	-	-	-	-	100	2	1	-	3	Face to Face	PP	2 Hrs
6.	28243104	DLC	Optimization Techniques in Machine Learning Lab	-	-	-	-	70	30	-	-	100	-	-	2	1	Experimental	AO	-
7.	28243105	DLC	Cloud Computing & Big Data Lab	-	-	-	-	70	30	-	-	100	-	-	2	1	Experimental	AO	-
8.	28243106	SP	Semester Proficiency$	-	-	-	-	50	-	-	-	50	-	-	2	1	Face to Face	SO	-
9.	28243107	PBL	Cornerstone Project	-	-	-	-	70	30	-	-	100	-	-	4	2	Experiential	SO	-
			Total	80	80	120	120	260	90	25	75	850	11	04	10	20	-	-	-
10.	28243108	MAC	Supply Chain Management	20	20	30	30	-	-	-	-	100	2	-	-	GRADE	Blended	MCQ	1.5 Hrs
11.	28243109	MWS	Mandatory Workshop on Blockchain at Department Level (Duration: Two Days)													GRADE	Interactive	MCQ	-
			Additional Course for Honours or Minor Degree: Permitted to opt for maximum two additional courses for the award of Honours or Minor Degree																

$Semester Proficiency– includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in the semester courses

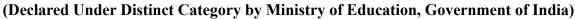**MCQ:** Multiple Choice Question **AO:** Assignment + Oral **PP:** Pen Paper **SO:** Submission + Oral **OB:** Open Book
* Course run through SWAYAM/NPTEL/ MOOC Learning Based Platform

HSMC	BSC	ESC	DC	DE	SPC	OC	DLC	NEC	SP	SIP	SLP	PDC	PBL	MAC	MWS
0	0	0	3	1	1	0	2	0	1	1	0	0	1	1	1

Mode of Learning					Mode of Examination					Total Credits
Face to Face	Online	Blended	Experiential	Experimental	PP	AO	MCQ	OB	SO	
13	3	0	2	2	6	2	9	0	3	20
65	15	0	10	10	30	10	45	0	15	Credits %

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR
(Deemed University)
(Declared Under Distinct Category by Ministry of Education, Government of India)
NAAC Accredited with A++ Grade
Centre for Artificial Intelligence
Scheme of Evaluation
B. Tech. VI Semester *(Artificial Intelligence (AI) and Machine Learning)*

(for batch admitted in academic session 2024-25)

S. No.	Course Code	Category Code	Course Name	Theory Block — Continuous Evaluation — Minor Evaluation I	Minor Evaluation II	Quiz/ Assignment	Major Evaluation	Practical Block — Continuous Evaluation — Lab Work & Sessional	Major Evaluation	MOOCs — Exam	Assignment	Total Marks	L	T	P	Total Credits	Mode of Learning	Mode of Major Evaluation	Duration of Major Evaluation
1.	28243201	DC	Deep Learning	20	20	30	30	-	-	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
2.	28243202	DC	Image Processing and Computer Vision	20	20	30	30	-	-	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
3.	282432XX	DE	Departmental Elective* (DE-2)	-	-	-	-	-	-	25	75	100	3	-	-	3	Online	MCQ	3 Hrs
4.	282432XX	OC	Open Category Course (OC-1)	20	20	30	30	-	-	-	-	100	2	1	-	3	Face to Face	PP	2 Hrs
5.	282432XX	SPC	Specialization Course (SPC-2)	20	20	30	30	-	-	-	-	100	3	-	-	3	Face to Face	PP	2 Hrs
6.	28243203	DLC	Deep Learning Lab	-	-	-	-	70	30	-	-	100	-	-	2	1	Experimental	AO	-
7.	28243204	DLC	Image Processing and Computer Vision Lab	-	-	-	-	70	30	-	-	100	-	-	2	1	Experimental	AO	-
8.	28243205	SP	Semester Proficiency$	-	-	-	-	50	-	-	-	50	-	-	2	1	Face to Face	SO	-
9.	28243206	PBL	Capstone Project	-	-	-	-	70	30	-	-	100	-	-	4	2	Experiential	SO	-
			Total	**80**	**80**	**120**	**120**	**260**	**90**	**25**	**75**	**850**	**12**	**03**	**10**	**20**	-	-	-
10.	28243207	MAC	Disaster Management	20	20	30	30	-	-	-	-	100	2	-	-	GRADE	Blended	MCQ	1.5 Hrs
11.	28243208	MWS	Mandatory Workshop on Intellectual Property Rights at Department Level (Duration: Two Days)													GRADE	Interactive	MCQ	-

Skill Enhancement Program/Research Internship/On Job Training for Four weeks duration (Optional)
Summer Semester of six-eight week duration will be conducted for makeup of Previous semester examination.
Additional Course for Honours or Minor Degree: Permitted to opt for maximum two additional courses for the award of Honours or Minor Degree

$Semester Proficiency– includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in the semester courses

MCQ: Multiple Choice Question   **AO:** Assignment + Oral   **PP:** Pen Paper   **SO:** Submission + Oral   **OB:** Open Book

* Course run through SWAYAM/NPTEL/ MOOC Learning Based Platform

HSMC	BSC	ESC	DC	DE	SPC	OC	DLC	NEC	SP	SIP	SLP	PDC	PBL	MAC	MWS
0	0	0	2	1	1	1	2	0	1	0	0	0	1	1	1

Mode of Learning					Mode of Examination					Total Credits
Face to Face	Online	Blended	Experiential	Experimental	PP	AO	MCQ	OB	SO	
13	3	0	2	2	6	2	9	0	3	20
65	15	0	10	10	30	10	45	0	15	Credits %

Centre for Artificial Intelligence
Scheme of Evaluation
B. Tech. VII Semester *(Artificial Intelligence (AI) and Machine Learning)*

(for batch admitted in academic session 2024-25)

S. No.	Course Code	Category Code	Course Name	Theory Block — Continuous Evaluation — Minor Evaluation I	Minor Evaluation II	Quiz/ Assignment	Major Evaluation	Practical Block — Continuous Evaluation — Lab Work & Sessional	Major Evaluation	MOOCs — Assignment	Exam	Total Marks	L	T	P	Total Credits	Mode of Learning	Mode of Major Evaluation	Duration of Major Evaluation
1.	282441XX	DE	Departmental Elective (DE-3)	20	20	30	30	-	-	-	-	100	3	-	-	3	Face to Face	PP	2 Hrs
2.	282441XX	DE	Departmental Elective* (DE-4)	-	-	-	-	-	-	25	75	100	3	-	-	3	Online	MCQ	3 Hrs
3.	282441XX	OC	Open Category Course (OC-2)	20	20	30	30	-	-	-	-	100	2	1	-	3	Face to Face	PP	2 Hrs
4.	282441XX	SPC	Specialization Course (SPC-3)	20	20	30	30	-	-	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
5.	28244101	SP	Semester Proficiency$	-	-	-	-	50	-	-	-	50	-	-	2	1	Face to Face	SO	-
6.	28244102	DLC	Creative Problem Solving	-	-	-	-	70	30	-	–	100	-	-	2	1	Experiential	SO	-
			Total	60	60	90	90	120	30	25	75	550	10	02	04	14	-	-	-
7.	28244103	MWS	Mandatory Workshop on Advanced Intellectual Property Rights at Department Level (Duration: Two Days)													GRADE	Interactive	MCQ	-

$Semester Proficiency– includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in the semester courses

MCQ: Multiple Choice Question   **AO:** Assignment + Oral   **PP:** Pen Paper   **SO:** Submission + Oral   **OB:** Open Book

* Course run through SWAYAM/NPTEL/ MOOC Learning Based Platform

HSMC	BSC	ESC	DC	DE	SPC	OC	DLC	NEC	SP	SIP	SLP	PDC	PBL	MAC	MWS
0	0	0	0	2	1	1	1	0	1	0	0	0	0	0	1

Mode of Learning — Face to Face	Online	Blended	Experiential	Experimental	Mode of Examination — PP	AO	MCQ	OB	SO	Total Credits
10	3	0	1	0	6	0	6	0	2	14
71.43	21.43	0	7.14	0	42.86	0	42.86	0	14.28	Credits %